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Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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DETROIT

SEPTEMBER NEW CAR SALES 175,286

World Highway Delegates Leave for Home; Exchange Ideas on Road Building

Problems of Europe and America Contrasted at Detroit Banquet; China Seen as Growing Car Market

Special from A. D. N. Detroit Bureau

DETROIT, Oct. 30.—The gavel has fallen—the world's conference of highway executives stands adjourned for four years, to meet then in Munich, Germany, that fair Bavarian city. The highway tours fostered by the Highway Education Board, National Automobile Chamber of Commerce and allied associations, following on the heels of the sixth international road congress at Washington, was the grand finale.

Naturally, bringing together this way representatives of sixty nations, all interested in highway building and traffic control, brought about a comparison of methods used in the United States and their own countries. The visitors, discussing their visit, were agreed that what impressed them most were our big buildings, our gigantic industrial organizations, the number of our roads and our organizing ability.

Several of the delegates, big men in their own countries, interested their American hosts, both in Detroit and on the tours, with their talks on road construction work abroad. W. A. Moffett of Campbell-Ewald, who was newspaper contact man on the Western tour, gathered considerable information of value about foreign roads from the delegates in his party. So interesting are some of these talks Moffett had with engineers en route that I take the liberty of quoting from his notebook.

"In the near future in London, pedestrians will restrain motor traffic in the vicinity of parks whenever they wish to cross a street by simply pressing a button which will turn on a red light," said F. L. D. Elliott, assistant commissioner of Scotland Yard, who has supervision of traffic regulations for London, his territory covering an area of approximately 700 square miles. "This light will remain on for fifteen seconds and will automatically turn green. The red light cannot again be turned on until a period of forty-

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CHEVROLET BUSY AT NEW BODY FACTORY

Indianapolis, Ind., Oct. 30.—Employment of additional workmen at the newly acquired commercial body plant of the Chevrolet Motor Company here, was begun last week, when approximately 100 were added to the pay roll, according to J. A. Jamieson, general manager.

At the same time it was announced here that stockholders of the Martin-Parry Corporation, meeting in New York, had approved sale of the Indianapolis factory to Chevrolet, the consideration being given as $900,000. It was decided to take inventory of materials and manufactured goods now on hand for disposal to General Motors.

Work on Chevrolet truck bodies was begun about ten days ago with the visit to the Indianapolis plant of W. S. Knudsen, president of Chevrolet, and his executive and engineering staff, who inspected the site for improvement and repairs that might be needed.

Mr. Jamieson's announcement stated that old employees of Martin-Parry were being replaced in the plant as rapidly as readjustments could be made and output speeded up, and it was expected that capacity production would have been reached not later than January 1. November's total, he estimated, would approach 5,000 bodies.

C. W. MATHESON JOINS GRAHAM-PAIGE AS AID TO R. C. GRAHAM

Detroit, Oct. 30.—C. W. Matheson has joined the Graham-Paige executive organization and will work closely with Robert C. Graham and General Sales Manager F. R. Valpey in the further development of the Graham-Paige distributing organization.

C. W. Matheson

Mr. Matheson has made his new affiliation after resigning from Chrysler Motors general staff, previous to which he had been vice-president of De Soto and general sales manager of Dodge Brothers. In joining the three Grahams, Mr. Matheson renews a business relationship of other years when he was general sales manager of the original Dodge Brothers Corporation at a time when the Grahams were directing their own truck building organization, later merged with Dodge Brothers.

In securing Mr. Matheson the Grahams have secured one of the foremost figures in the automobile industry, for Mr. Matheson has been identified with it in a prominent way since he first started as the manufacturer of the Matheson car at Wilkes-Barre more than twenty years ago. As a sales executive he ranks with the highest in the business.

STUTZ ANNOUNCES NEW 1931 MODELS IN INDIANAPOLIS

Indianapolis, Ind., Oct. 30.—Following closely upon announcement of plans for refinancing, the Stutz Motor Car Company of America introduced locally its 1931 line of automobiles, comprising three groups with the wheel bases of 127½ inches, 134½ inches and 145 inches and prices ranging from $1,995 to $10,800 at the factory here.

The task of providing dealer stocks for display is being pushed as rapidly as possible.

The new line will consist of the Stutz Eights and a smaller model known as the LA Stutz, which will be powered by practically the same motor as was used in the Blackhawk Six. Both six and eight cylinder power plants are of Stutz manufacture.

SEASONAL DECLINE IS CUT; DROP FROM 1929 NARROWS

Falling Off Last Month From Corresponding Period Last Year 42%, as Against 46% Loss in August

NEW YORK, Oct. 30.—Complete automobile registration figures from all states reveal that retail sales of new passenger cars in the domestic market in September amounted to 175,286, as compared with the recent Automotive Daily News estimate of 170,000. More favorable reports than had been expected came from several of the latest states to report, sending the month's total above expectations.

Several encouraging factors are to be found in the September total. In the first place, the seasonal decline from the preceding month, when retail sales were 203,737, was slightly less than 14 per cent., as compared with a normal seasonal falling off in September of 15 per cent.

The rate of decline from the corresponding month of last year was lower than in August, and this narrowing of the rate was a real indication that August saw the bottom of the business depression, inasmuch as it concerns the automotive industry.

New car registrations in September, 1929, were 304,452, and the September, 1930, total was 42 per cent. below a year ago, as compared with a drop of 46 per cent in August. This was the first time this year in which the rate of decline in car sales from last year was reduced from the month just preceding.

For the first nine months of the current year, according to the preliminary figure, new car retail sales in the domestic market were 2,286,730, as against 3,269,363 in the corresponding period of last year, a decline of 30 per cent. On the basis of the results in the first nine months, it is estimated that the decline for the year will be about 33 per cent.

As far as the industry outside

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TIRE RETAILERS WILL BENEFIT BY NEW PRICE BOOST

Akron, O., Oct. 30.—The larger tire companies have prepared new list prices on tires effective November 1, the date on which all trade contracts for the next twelve months become effective. The lists show advances ranging from 2½ to 5 per cent. over prevailing price levels. It is understood that the new schedules will carry a guarantee until May 15 and will provide a stable price level for spring-dating business.

Although the retail price list is being advanced, the tire companies themselves are not benefiting from the new schedules. This is due to the fact that, simultaneous with the increased retail prices, the tire companies are increasing dealer discounts to approximately 25 per cent. from the current rate of approximately 21¼ per cent.

Dealers, however, will benefit substantially from the changes to go into effect November 1. The change was decided upon to encourage the

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Dealer Service Sales Spurt in Indianapolis

Indianapolis, Oct. 30.—Automobile dealers here reported a general and pronounced upturn in calls for service during the last two weeks. Although a great deal of the business arriving at their shop doors was believed to be seasonal in nature, it was also due in large part, according to service men, to the mid-October cold snap which pushed the temperature suddenly from unseasonable warmth to below the freezing point.

Valve grinding and general tune-up work was very much in the foreground of demand, with the cold spell adding considerably to the battery and ignition division.

Other factors, however, besides the weather were seen in the service upturn, with dealers generally making a strong bid for the work to make up for slow movement of new cars in the face of growing competition from better organized garage and repair shops.

A tremendous increase in service volume was reported by the Elliott-Wilson Motor Company following removal from a residential district location to Meridian Street, the heart of "automobile row." A combination of the weather and other circumstances was given as the reasons for this upturn, one cause being ascribed to the absence of

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Sinsabaugh Sees Object Lesson in Hupp Banquet

By CHRIS SINSABAUGH

DETROIT, Oct. 30.—**The best business cocktail I have imbibed since I came to Detroit two months ago was had last night at the banquet tendered by the Hupp Motor Car Corporation to those 350 distributors, dealers and purchasers who participated in the Second Annual Skyway Parade and Million Dollar Driveaway promoted as an object lesson to business men of what can be done in these dull times if the sellers of merchandise are on the toes and go after sales. The affair has more than accomplished its purpose—that of inspiring the entire business world.**

It may well be said that the promoters of this unique event certainly accomplished their purpose. The business world in general was inspired by the great demonstration and incidentally today 300 new Hupmobile eights were driven over the roads from Detroit to all parts of the United States by their new owners.

These Argonauts came here by air in nineteen giant planes carrying 166 persons, while eighty more came by train from Pittsburgh and Philadelphia. Fourteen of the planes came from Chicago, two from Rochester, N. Y., that being a general rendezvous for surrounding cities; two from Huntington, W. Va., two from New Orleans and one from Cleveland. The feature flight was made by the Shell Oil plane from St. Louis, which came here with the Chicago contingent. It was piloted by the celebrated Jimmy Doolittle, who made the flight from St. Louis to Chicago in 1 hour and 35 minutes, and from Chicago to Detroit in 1 hour 20 minutes.

Distributors participating in the sky parade and driveaway were as

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World Road Delegates Complete Survey in U. S.

(Continued from Page 1)

five seconds has elapsed, this latter provision being a safeguard against abuse of the privilege."

"In France we do not have as many concrete roads as you do here but mainly stone block roads in the cities because we still have horse-drawn vehicles," said Eugene C. H. Trehard, chief engineer of public roads, Province of Seine, France. "Ours is an old country and we have had roads for centuries and our problem is to adapt them to present needs. Our distances are not so great as yours, either."

Angelo Marietti, director general of the Italian State Tourists Department, said:

"Italy has a new type of road, known as autostrades and the time is not far distant when a motorist may make a non-stop drive from Torino at the top of the Italian boot to Reggio at its toe," he said. The autostrades are reserved for usually fast traffic in safety and with unlimted speed permitted by law, built of cement, carefully graded, wide enough to permit passage of three cars and having all intersecting roads passing either overhead or underneath."

"I notice the highways in your suburbs are as good as in your cities while in Germany it is not so," was the comment of Dr. William Geisler, professor of Baden Technical University of Germany. "Our road problem is also different from yours. In Germany roads were already built when the automobile came, and it is now a job resurfacing them, four-fifths of them with light surfacing and one-fifth with heavy surfacing."

"Switzerland's highways cannot exceed a 10 per cent. grade and an 8 per cent. grade is the maximum except in emergencies because of our Alpine passes," said Alexander von Steiger, inspector general of public works in the Swiss Department of the Interior: "This means that our roads must make sweeping S-curves in ascending a mountain pass. They start at the bottom and sweep back and forth perhaps a dozen times. In order to ascend one kilometer, a motorist following the road may have to drive twelve kilometers.

"The main problem in road building in Spain is to solve the problem of drains," explained Federico Turell, engineering director of highways of the province of Barcelona, Spain. "That's because the country is very mountainous. A great deal of our time is also given to the inclination of curves. We have many fences, walls and posts on dangerous turns, our posts being painted like yours, save instead of the white alone we have both white and red, according to the background. We also have red and green reflectors similar to yours.

"We have had roads for centuries, and now it is mainly a problem of changing and resurfacing them for modern needs and either eliminating dangerous grades and turns or changing them to eliminate the danger."

"China, equal in area to the United States and Mexico combined, has 32,000 miles of improved highways," according to H. H. Ling of Nanking, China. "China's showing may seem insignificant as compared with those in Europe and America, but consider that a few years ago we had practically none. In recent years highway construction has been going on with a rush. You may well visualize what the total will be in ten years.

"China is, beoynd a doubt, a tremendous potential market for American automobiles and consequently the highway building we are now doing is going to broaden that market."

"Finland is the only civilized country of the world which has extended its highway system to the shores of the Arctic Ocean, and has built what is believed to be the northernmost road in existence," reported E. W. Skogstrom, director general of roads of Finland. "It runs from the northernmost railway station, Rovaniemi, direct to Petsamo, a distance of 550 kilometers, or about 350 miles. It is nearly 20 feet wide. It was built in 1919 to furnish contact with Finland's sole ocean port through which come imported food products, Finland being entirely dependent upon such imports for food products."

DEALER SERVICE SALES INCREASE IN INDIANAPOLIS

(Continued from Page 1)

any other authorized Dodge service station on the row.

The J. C. Scanlan Company, direct Dodge dealer, followed reorganization of its service department with a unique direct-by-mail volley aimed to bring service customers to its shops and highly satisfactory results were forthcoming. A special offer of premiums with valve grinding produced an abundance of work along these lines, and the appeal was given credit for a large amount of other calls.

"Full to the guards" was the way Robert D. Johnson, head of the Johnson Chevrolet Company, described the operations of his service department where in recent weeks numerous new ideas have also been put into effect looking to the greater satisfaction and convenience of the customer.

Following a visit by a factory service man, called to the shop in an attempt to straighten apparent difficulties in its operation, Jones & Maley, Inc., De Soto distributors, reported a more satisfactory condition from both their own and the customer's viewpoint, and it was felt that now after months of effort the service department could be expected to pay its own way.

At United Motors Service, specialists in mechanical and electrical work, the cold spell brought a rush of trade after a lull that was apparently produced by the preceding heat wave, which set new high temperature records for October.

Roy Hickman, head of Lathrop-Moyer Retail, Inc., declared Oldsmobile and Viking customers were keeping his shop working at capacity, although the feeling of keeping operating expenses on their cars at a minimum was responsible for the lack of a great many big jobs, with a natural effect on the parts volume.

R. MACFEE RESIGNS AS SECRETARY OF PARTS ASSOCIATION

Detroit, Oct. 30.—R. Macfee, secretary of the National Standard Parts Association, Detroit, has resigned, effective December 1, according to an announcement made by E. P. Chalfant, executive vice-president of the N. S. P. A.

Macfee leaves the automotive industry to accept a position as executive secretary of the Central Supply Association, a long established organization of manufacturers and jobbers of plumbing and heating equipment. Appointment of Macfee's successor in the N. S. P. A. has not yet been made.

GRAHAM-PAIGE CORP. REAPPOINTS BROOKE, SMITH, FRENCH AGENCY

Detroit, Mich., Oct. 30.—Robert C. Graham, vice-president of Graham-Paige, announces the reappointment of Brooke, Smith & French of this city as advertising counsel of his company beginning December 1.

The return of this account to Brooke, Smith & French renews a business relationship that began at the time when the three Grahams re-entered the automobile industry and assumed ownership control of their present organization. During the period of the former relationship the Grahams introduced the first Graham-Paige sixes and eights, which at that time, it is claimed, established a new all-time first-year sales volume record for the industry.

SEPTEMBER NEW CAR SALES HIT 175,286

(Continued from Page 1)

of the Ford Motor Car Company is concerned, it found some comfort in the fact that the retail sales of the Ford car in September accounted for a smaller percentage of the total business than was the case in the preceding month and in the first seven months of the current year. Chevrolet's share of the total also was off slightly, leaving the rest of the industry a bigger share of the business than it has been getting earlier in the year. A trend toward the medium price class was particularly noticeable in September, this being one of the more encouraging factors of the entire automotive situation at this time.

Ford registrations in September, according to the preliminary figures, were 65,578, as compared with 77,476 in August and 112,489 in September, 1929. This was a seasonal decline from the preceding month of 15 per cent. and a drop of 41 per cent. from last year. While the decline from August was slightly larger than that of the industry as a whole, the falling off from last year was slightly smaller.

Chevrolet registered 39,022 new cars in September, as compared with 46,807 in August and 61,027 in September, 1929. This was a seasonal decline from August of 17 per cent. and a drop of 36 per cent. from last year. Chevrolet's seasonal drop was larger than that of the industry by a substantial margin, but its decline from last year was substantially smaller.

Figures now available on September registrations cover all states, but Ford and Chevrolet are the only individual totals available today.

Complete registrations by makes and states will be published in Automotive Daily News for Saturday, November 1.

Following are the month-by-month new car registrations for this year thus far, as compared with the corresponding months of last year:

	1930	1929
January	180.094	219,844
February	211,645	235,337
March	298,824	378,346
April	357,064	481,096
May	345,041	454,153
June	260,942	386,537
July	254,097	432,695
August	203,737	376,933
September	175,286	304,452
Totals	2,286,730	3,269,363

CHEVROLET PLANT AGAIN UNDER WAY AT JANESVILLE ON A NORMAL SCHEDULE

Milwaukee, Wis., Oct. 30.—The Chevrolet plant at Jonesville, Wis., has resumed operations which for the time of the year are about on a normal basis, according to Ellery Wright, factory manager. Operations were discontinued three weeks solely for the purpose of taking inventory, Mr. Wright stated.

Last year the inventory period came in December. Inventory period may vary from year to year, depending on change of operations, etc. The Janesville plant employs slightly fewer people this year than it did last, Mr. Wright reported.

According to Harry Randall, factory manager of the Fisher Body plant at Janesville, operations have also been resumed after an inventory period of three weeks. These conditions are the same as they were a year ago. Mr. Randall stated that the Fisher plant is now employing approximately the same number of people it did last year.

Herbert Brumder, president of the Blackhawk Manufacturing Company, Milwaukee, makers of automobile tools, jacks, etc., is looking forward to an increase in production wrenches, coincident with some pick-up in the automobile industry.

FEDERAL NAMES McKENZIE WESTERN REPRESENTATIVE

San Francisco, Cal., Oct. 30 (UTPS).—A. W. McKenzie, among the oldtimers in the West Coast automobile and truck fields, has been appointed Western representative for the Federal Motor Truck Company and will make his Western headquarters at the factory branch establishment in San Francisco.

SPARKS from DETROIT

The Retort Proper

* * *

Wanted, a Musical Esperanto

* * *

International Back Seat Driving

* * *

Chris Sinsabaugh—Detroit Editor

"THAT reminds me," said H. H. Rice, assistant to the president of General Motors, as he was toastmastering at the highway inspection tours banquet given to the delegates to the sixth international road congress, "of the New York man who came out here and irritated his Detroit friends by bragging overmuch of New York's skyscrapers and belittling Detroit and its buildings. A Detroit man drove him around and pointed out our highly thought of tall buildings, only to be met with more sarcastic remarks. As they drove north up 2d Avenue, the Fisher Building loomed up in all its magnificance. 'That's something like it,' said the New Yorker, 'what building is that?' And the Detroiter replied, 'I don't know, it wasn't there last week when I was out this way.'"

* * *

AS president of the American Organizing Commission and also president of the sixth international road congress, R. D. Chapin, chairman of the board of Hudson Motors, really represented the United States in the minds of the delegates to the road congress, seeking some one to thank for the highway inspection tour which wound up in Detroit.

Verbal bouquets of all kinds were thrown at Mr. Chapin at the banquet, but the climax of the wave of appreciation came in the formal presentation to Mr. Chapin of Violet, a tiny Florida alligator, brought here by those participating in the Southern tour. The presentation was made by R. W. Bentley of Tallahassee, Fla.

In accepting the present from the delegates, Mr. Chapin promised to take it to Europe with him four years hence, when the road congress assembles at Munich, Germany.

* * *

IT was told about at the banquet of the embarrassment of the managers of the Western tour at Cedar Rapids, Ia., when it was discovered that the orchestra did not have the music of enough national anthems to go round. The Cedar Rapids folk threw a party for the visitors and it was the duty of the orchestra to play a national anthem for each country represented. There were twenty-four countries, but the musicians were shy on Spain, Bolivia and Colombia. Representatives of the three countries were quick to note the oversight and explanations were demanded. Here's where diplomacy came in. It was explained that when the names of the delegates were sent to Cedar Rapids it was not known Spain, Bolivia and Colombia representatives would be on that particular tour, so Cedar Rapids had not included the music in the program. This saved the day, but it was a narrow escape from an international complication.

* * *

AN immediate aftermath of the highway tours banquet was the midnight trip abroad made by Robert Graham, chairman of the export committee of the National Automobile Chamber of Commerce and also vice-president of the Graham-Paige Motors Corporation, and H. H. Rice, toastmaster of the banquet and assistant to the president of General Motors.

Hubert McNally of Graham fixed it up for these two notables to be taken through the new international tunnel connecting Detroit and Windsor at the conclusion of the banquet, a special concession in honor of the N. A. C. C. export committee chairman. To duly celebrate, the car was stopped at the boundary line in the tunnel and Mr. Graham, on the back seat and speaking from Canada, talked to Mr. Rice, on the front seat and in the United States.

* * *

TWO of the three responses made at the highway tours banquet were in foreign tongues, so all I got out of them was the reference to chicken and ice cream made by Dr. Erwin Nagel, vice-president of the German Road Association. I got that, and took it he was referring to the menus of the various dinners attended since the visitors came to this country.

It was Major F. C. Cook, deputy chief engineer of the Ministry of Transport of Great Britain, who really was the spokesman for the three tours. The major summed up the tourists' reactions by discoursing eloquently on the immensity of American distances, the width of our roads, the vast mileage of concrete highways, the hospitality of the cities and towns, particularly the smaller places, and the courtesies shown by the highway commissioners of the various states.

MERCHANDISING
ACCESSORIES
EQUIPMENT

WHOLESALE

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

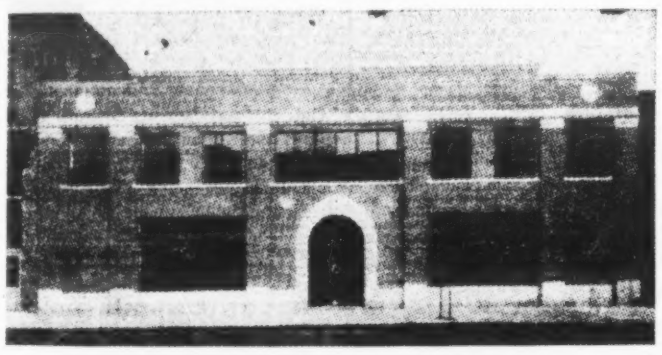
Almetal Announces Winners In Jobber Salesmen Contest

CLEVELAND, Oct. 30. — The Almetal Universal Joint Company of this city announces the winners of its booster campaign, a contest between jobbers' salesmen all over the country on the Almetal line. The judges were: Ira Saks, Accurate Parts Manufacturing Company; Burt Patterson, Thompson Products Company; Frank Wolf, Lake Erie Metal Products Company; Walter Abel, Abel Automotive Parts Company; F. W. Peters, Almetal Universal Joint Company.

The $100 award for highest sales went to D. Warnick of the Universal Joint Service, Inc., of Cleveland, while Frank Steffen of the Lambert Company, Ltd., Los Angeles, was second, receiving $50. The cash and merchandise awards were won by the following in order:

$500, A. Hatton, Northwest Bearing Company, Seattle; $250, D. O. Morrow, Motive Parts Company of America, Inc., Milwaukee; $100, B. Dorman, Ohio Auto Parts Company, Columbus, O.; $75, F. Blondeau, M. H. Rykoski, New Orleans; $50, B. A. Anderson, Lambert Company, Ltd., Los Angeles; $25, W. J. Boyle, Automotive Bearings and Equipment Company, Cincinnati; $25, Mr. Snyder, Sidney Auto Parts, Sidney, O.; $25, C. Borland, L. J. Messer Parts, Lincoln; $25, Mr. DeMoss, K. & G. Sales Company, Baltimore; Frank Steffen, Lambert Company, Ltd., Los Angeles; Gladstone bag, J. Wolff, Jamaica Gear and Axle Company, Jamaica, N. Y.; sport jacket, Mr. Furey, Motive Parts Company of America, Chicago; brief case, O. A. Maynard, Lambert Company, Ltd., Los Angeles; toilet set, Mr. Krell, Bee Automobile Company, Allentown, Pa.; smoking set, C. Jones Consolidated Motor Parts, Brooklyn; traveling bag, D. Warnick, Universal Joint Service, Inc., Cleveland; wardrobe trunk, L. Smith, Lambert Company, Ltd., Los Angeles; pen and pencil set, Jim Hayden, Lambert Company, Ltd., San Francisco; portable victrola, Mr. Bowen, Central Electric Company, Hattiesburg, Miss.; Elgin watch, H. J. Heitzinger, Crescent Garage and Parts Company, Bradford, Pa.; pen and desk lamp set, J. Schwalm, Universal Joint Service, Inc., Cleveland; cocktail shaker, Bill Blair, Lambert Company, Ltd., Los Angeles; Elgin pocket watch, B. Grimm, American Motor Specialty Company, Newark; gladstone bag, Roy Muehl, Milwaukee; Eastman camera, W. T. Yeaple, Jamaica Gear, Jamaica, N. Y.; Underwood portable typewriter, Mr. Renner, Sam Barnett, Hoboken, N. J.; traveling bag, Schuerman, Wel-Ever Piston Ring Company, Toledo; automobile robe, W. L. Pence, Craig Motor Service, Uniontown, Pa.; cigarette case, Mr. Gholston, Motor Parts and Supply Company, Columbus; wrist watch, L. D. McNeil, Crawford Company, Shreveport, La.; wrist watch, A. Saunders, Lambert Company, Ltd., Los Angeles; cigarette case and lighter, W. White, Motive Parts Company of Pennsylvania, Pittsburgh; toilet set, Mr. Smith, Auto Parts Company, Ann Arbor; zipper bag, Mr. Forbes, Fort Wheel and Rim Company, Fort Worth; Milano Hesson pipe, F. Adolph, M. H. Rykoski, New Orleans; brief case, C. R. Buchanan, Harts Automotive Parts Company, Chattanooga.

New Station in Detroit



A completely equipped service station for the portable tool industry has recently been erected by the Chicago Nneumatic Tool Company at 570 East Larned St., Detroit. The building is reinforced concrete, faced with tapestry brick in assorted shades as a pleasing background for the limestone trim. The 75-foot front has two plate glass display windows, each 13 feet wide by 7 feet high, containing the various CP products, illuminated at night by concealed display lights.

The building contains approximately 12,000 feet of floor space with two stories and a basement. The east half of the first floor of the building serves as a warehouse for compressors, engines and other heavy machinery, while the west half houses the parts storage, a sound-proof test room, a 35-foot repair bench, shipping and receiving benches, delivery counter, etc. The office occupies the front half of the second floor, the balance being devoted to storage of complete tools.

Editor's Column

NOW that the jobbers are awakening to the fact that the old idea of retail advertising promotion was to pour in new customers at the top as fast as the old ones run out at the bottom, they are paying a little more attention to the job of plugging up this wasteful leak.

Since it is a well recognized fact that it is much more expensive to sell a new prospect than one already familiar with your service, your merchandise and your policies, isn't it strange that we find advertising budgets so lopsided that they allowed little if any money for promoting and holding the good will of present customers?

Some jobbers are so shortsighted in this respect that they have been known to discard from the mailing lists the names of dealers as soon as they begin to patronize their store.

Every jobber realizes that it is good business to maintain contact with those customers who have stopped buying, but because it has no adequate system set up to ferret out the required information and to function automatically after the information is acquired this important phase of the business is sadly neglected.

The result is that about once a year the head of the firm begs the credit office to send out a letter. They reluctantly dig up a few names, send out a letter and let it go at that, until another year rolls around.

The danger in systematizing this work is that it may become so complicated and cumbersome that the cost of operation defeats its own purpose.

The first essential is that the mailing department have available at regular intervals the names and addresses of customers who have failed to buy over a predetermined period of time. Every month the credit office should furnish the mailing office with a list of customers for whom they have had no billing during the last thirty days.

The mailing department must be prepared to use this list before it gets cold, for any delay might mean a change of status of some of the names and consequent complaints from aggrieved patrons. The greatest insult, next to being dunned, is to ask a customer why he has failed to buy in your store, immediately after he has bought.

Undoubtedly, the most concrete form of appeal is a special merchandising offer, something that might induce the dealer to come to the store again and resume relationship. However, if you are already conducting an aggressive direct-mail campaign which includes your inactive as well as active accounts, you may have to resort to a special letter, minus the merchandise appeal.

It would pay retailers to "follow up" inactive accounts as a means of combating business depression, was the opinion expressed at the October dinner meeting of the Retail Credit Association of New Jersey at the Hotel Douglas.

Form letters that met the situation a year ago would not do today, it was declared. A judicious attitude was advocated as a means of reviving inactive accounts and of maintaining slow but deserving credits over the depression period.

One of the leaders in the discussion pointed out that, while it was not entirely feasible to solicit slow accounts at such a time, merchants easily could save by reviving the inactive ones. He declared the credit man should exercise good judgment lest potential good customers be lost to the store.

It was emphasized that merchants should give added support and leeway to their credit departments. Such policy, it was declared "would repay them over and over."

The ability to "play ball with the fellow who is willing to pay and who can come back" was stressed as one of the virtues of an alert credit man in facing current problems.

Wholesale Brevities

Seattle, Wash., Oct. 30.—The Solon Grinding Company has been appointed distributors for Liquid Gold lubricators in Washington, Idaho and Montana. Lorin Solon, manager of Solon Grinding Company, reports very good sales of the lubricator.

Camden, N. J., Oct. 30.—A. M. Lendrum has recently been appointed district manager for the R. H. Hollingshead Company of this city, and will make his headquarters in Cleveland.

Seattle, Wash., Oct. 30.—R. C. Bosselman Company has recently been appointed distributor for Burgess-Norton Manufacturing Company of Illinois, in this state. The company is now carrying complete stocks of piston pins, X-valves and B-N clutch facings.

Hartford, Conn., Oct. 30.—The Universal Grinding Company, for the past ten years located in Hoadley Place, has secured new and larger quarters at 231 High St. Removal will be conducted as fast as the circumstances permit, and the firm expects to be settled within the next week. The Universal Grinding Company has specilized on pistons and kindred equipment, and in the new location will stock automotive parts such as oversize pistons, rings and pins, as well as bushings and other parts.

Newark, N. J., Oct. 30.—The Perfect Circle piston rings line has been added by the Auto Gear and Axle Corporation of this city.

Raymond, Wash., Oct. 30.—Al Berthold and A. Pichards of the Piston Service Company, Inc., Aberdeen, Wash., spoke at the Otober meeting of the Willapa Harbor Automotive Association, held here. Berthold is an aviator.

Dallas, Tex., Oct. 30 (UTPS).—The Motor Parts and Equipment Company, automotive jobber at Beaumont, has just occupied its new home. The building is 120 by 120 feet, and is composed of reinforced concrete and brick. This building is divided into six sections for the convenience of customers. T. M. Schmidt is president.

Newark, N. J., Oct. 30.—The Elin Auto Supply Company of this city has added the Shaler-Risbone line.

Independence, Ia., Oct. 30.—The National Auto Supply Company will open a branch at 500 West 5th St., Waterloo. B. O. Gates and P. W. Snow will be in charge.

Dallas, Tex., Oct. 30 (UTPS).—The Beard & Stone Electric Company of Dallas announces that Jess Fourney, formerly with the Ferriss Company of Dallas, has been added to its sales forces.

Trenton, N. J., Oct. 30.—J. Harry Hearnen, jobber, has added the Weidenhof line.

Denver, Oct. 30.—The Auto Equipment Company has taken advantage of the nation-wide piston and pin advertising of McQuay-Norris to issue a little pamphlet to its trade on Nelson Bohnalite pistons.

Chester, Pa., Oct. 30.—Hyman Stein, Inc., has moved into new quarters at 814 Welch St. The fully equipped mechanical shop is the center of attraction. E. B. Austin is in charge of all mechanical work.

Richmond, Ind., Oct. 30.—Miller Brothers Hardware Company has recently installed a piston grinder and other mechanical service equipment.

Patchogue, N. Y., Oct. 30.—L. Monniess is now carrying a complete line of replacement parts to service the repair trade in Suffolk county.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

OIL FILTER TESTS MADE BY AC SPARK PLUG CO.

Flint, Mich. Oct. 30.—Three interesting oil filter tests by C. W. McKinley, research engineer of AC Spark Plug Company, showed that the oil filter removed as much as one teaspoonful of abrasive material in every 1,500 miles of driving. That wear with unfiltered oil was five times more than with filtered oil, and that in 10,000 miles driving the oil filter removed more than two pounds of dirt, sludge and abrasive matter from the oil, thus making servicing of the filter necessary at this mileage.

WILLERT TO DISTRIBUTE KELLY-SPRINGFIELD TIRES

Erie, Pa., Oct. 30.—W. J. Willert, operating a modern super-service station at West 26th and Washington Streets, at a point where three leading highways through Erie converge, has taken the distributorship for products of the Kelly-Springfield Tire Company.

GRAND RAPIDS GAS WAR FORCES SERVICE MEN TO ORGANIZE

Grand Rapids, Mich., Oct. 30.—Activities of "bootleg" gasoline stations in Grand Rapids suburbs have driven independent sations to organize for protection. Within the month of October, gasoline prices have been forced down until the price at present is seven gallons for $1 instead of five galons for 99 cents regularly.

Independent stations, to secure any trade at all, have been compelled to lower their prices, with a subsequent cut in the attendants' wages, and operation of their stations practically at cost.

Protecting themselves, the independents formed the Service Station Employers nad Operators Association. The twenty-five station operators present joined, and it is estimated that approximately 150 more will affiliate in the near future. The purpose of the association is to secure the co-operation of the public.

C. K. BABBITT OPENS PHILADELPHIA STORE

Philadelphia, Oct. 30.—Charles K. Babbitt, wholesale jobber and distributor of automotive supplies, formerly doing business at 6555 North 20th St., has opened a new store at 1433 Fairmount Ave., handling such lines as AC spark plugs, Champion spark plugs, Dunning air compressors, Adams greasing equipment, Cuno products, including Lifetime oil filters; Staybestos brake lining, G P A glycerine, Rico Clear View windshield arms and blades and Harco products. He plans later to carry such automobile parts as gaskets and valves. The territory covered is Philadelphia and vicinity, within a radius of twenty-five miles, and five outside salesmen and two counter men are employed. Present store space is 25 by 100 feet.

The house sells both to dealers and curb jobbers, the latter on a cash basis, wholesale only. Prior to March 1, Mr. Babbitt for twelve years was a partner in the K M Auto Supply Company, Broad and Clearfield Streets, which partnership was dissolved, W. I. Kauffman continuing that business.

BLACK & DECKER OFFERS NEW POLISHING LINE

A new line of electric polishes has just been announced by the Black & Decker Manufacturing Company of Towson, Md., for use with the portable electric polisher which was introduced a short time ago.

The Black & Decker No. 1 electric polish when used with the electric polisher cleans, polishes and waxes, it is claimed.

Where the surface of the car is already clean, that is, free from road film, the new Black & Decker No. 2 electric body wax is used with the electric polisher. Another new compound just introduced is Black & Decker No. 3 electric top wax. This is used with the electric polisher on black leatherette tops only.

NEBRASKA ACCESSORIES PARTS BUSINESS GAINS

Omaha, Neb., Oct. 30.—The replacement parts and accessory business is characterized as "exceptionally good" throughout Nebraska by M. L. Cohn, president of the National Accessories, Inc., one of the leading jobbing firms here. A portion of the business is credited to owners repairing and driving cars that normally would have been traded in.

To meet the demand, Mr. Cohn's firm has been forced to double its machine shop equipment and to install one of the largest piston grinders in this part of the country. A similar machine is to be installed at the company's Kearney, Neb., branch house within the next few weeks.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

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Member A. B. C.

FRIDAY, OCTOBER 31, 1930

ADVERTISING AND BUSINESS HEADQUARTERS
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Harry A. Tarantous, Business Manager. J. Edward Schipper, Eastern Manager.
George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500; Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.

EDITORIAL DEPARTMENT
350 Hudson St., New York, N. Y. Telephone CAN al 1000
Alexander Johnston, Editor. William C. Callahan, News Editor.
Detroit Bureau—Chris Sinsabaugh, Editor, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500. Contributing Editor, John C. Wetmore. A. Benson Carleton, Technical Editor.
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Export Improvement

ONE of the most encouraging developments of recent months, encouraging, that is, to hopes of real rehabilitation of business next year, is to be found in a statement issued by James D. Mooney, head of General Motors Export, on his return from a three months' stay in Europe. "I am greatly encouraged," Mr. Mooney said, "by the way our business in Europe is holding up and I believe that next year will see considerable improvement in economic conditions generally and in the production and sale of motor vehicles in particular."

Mr. Mooney then proceeded: "Elsewhere in the world conditions are not as favorable as they are in Europe, but here again I look for very satisfactory improvement in 1931, and the best evidence I can offer that things even today are not as bad as they are said in certain quarters to be is the fact that our General Motors volume in the overseas market this year will be in excess of $150,000,000."

Before Mr. Mooney went abroad last summer he stated very frankly that the outlook for American automotive export business appeared very dark. He felt that it would take us years of intensive effort to get back the position in the export field that we had gained at the beginning of 1930. Now, Mr. Mooney is not a man given to extravagant statements. He leans very much to the conservative side and his present statement makes it evident that the situation in the European field has definitely improved.

The average man does not realize how important a part export business plays in our general national prosperity. In the automotive business exports account for a large volume of our total production. In 1929 export business gave every man connected with the automotive industry two months of work. That means one-sixth of the total activity. Reduced exports mean reduced total volume, which affects prices, sales and general prosperity. So we say that Mr. Mooney's statement contains encouragement for every man connected with the automotive industry, whether he is executive, a factory worker or a retail salesman.

Normal Purchasing

IN a speech made during the campaign, but not, happily, a "campaign speech," Gov. Roosevelt of New York made a point that deserves widespread attention and universal observance. "Normal purchasing is necessary for complete economic recovery," said Gov. Roosevelt. "Our present task is to pursuade the buying public of this country to go about their business of purchasing in a normal way and in a different spirit from that in which they are now acting."

Then the governor added: "You and I know that by using the present actual existing buying power of the country we can furnish jobs to a great part of those who are unemployed today."

That business conditions are slowly swinging into an upward movement is now fairly well established, and, when the final analysis of this depression comes to be made, we shall probably find that August, 1930, marked the end of the decline. However, the condition that actually is retarding recovery is the continuing reluctance of the public to buy in normal quantities. Some of the fear that held sway for so long remains. Mr. John Q. Public still hesitates before he buys and then says, "Well, I guess I'll wait just a bit longer," and pop goes another deposit in the savings bank.

Now, savings bank deposits are one of the soundest factors in our national life, but even savings bank officers would tell a prospective customer that the soundest factor can be carried too far. Deposits in savings banks have reached a figure that makes it difficult for those helpful institutions to put their deposits out at a paying rate of interest.

What we need now is just normal buying, based on the present financial condition of the country. Give us this and unemployment, depression and our other economic ills vanisn over night.

REO REPORTS LOSS FOR NINE MONTHS

New York, Oct. 30.—Reo Motor Car Company reports for quarter ended September 30, 1930, net loss of $956,488 after depreciation, etc. This compares with net loss of $172,961 in preceding quarter and net profit of $407,297 equal to 20 cents a share (par $10) on 2,000,000 shares in third quarter of previous year.

Net loss for first nine months of 1930 totaled $1,305,885 after above charges, comparing with net profit of $2,093,655 or $1.04 a share on 2,000,000 shares in first nine months of 1929.

OTHER FINANCIAL NEWS

MULLINS MANUFACTURING

The Mullins Manufacturing Corporation reports for quarter ended September 30, 1930, net loss of $25,428, after interest, depreciation, etc., comparing with net profit of $23,704, equal to 79 cents a share on 30,000 no-par shares of $7 preferred stock in preceding quarter and net profit of $133,048, or 81 cents a share on 100,000 no-par shares of common stock after preferred dividend requirements in third quarter of 1929.

Net loss for the first nine months of 1930 totaled $31,240 after above charges. This compares with net profit of $474,748 in first nine months of 1929, equal, after dividend requirements on 7 per cent. preferred stock, to $3.17 a share on common stock.

H. H. FRANKLIN

Directors of H. H. Franklin Manufacturing Company have voted to omit the quarterly dividend of $1.75 a share on the preferred stock, due November 1. In announcing omission of the preferred dividend H. H. Franklin, president of the company, said:—

"In view of the business conditions that have prevailed during the past fourteen months and in consideration of the expenditures necessary for our development plans, this action was taken. As the preferred dividends are cumulative, the omitted dividend will be the first to be paid.

"Business expectations for 1931 have been indicated as favorable by Franklin distributors attending the annual conference in Syracuse, ending Tuesday. Outline of the company's future program and display of latest models were enthusiastically received. Increased factory activities have promptly been started to meet the greater demand. While factory shipments in 1930 have been reduced this year, retail sales by dealers, compared to 1929, have been better than the industry's average, and proposition of total fine car business obtained by Franklin has reached a new high point."

COMING EVENTS

NOVEMBER

3- 6—**Chicago, Ill.** National Tire Dealers Association convention.
7- 8—**Cleveland.** National Battery Manufacturers Association meeting at Hollenden Hotel.
6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
12—**Cleveland.** Associated Manufacturers of Fabric Automobile Equipment meeting at Hollenden Hotel.
10-13—**Chicago.** American Petroleum Institute meeting at Stevens Hotel.
10-14—**Atlantic City, N. J.** National Hardware Association convention.
18-19—**Chicago.** National Association of Finance Companies' annual convention.
13-19—**Cleveland, O.** Motor and Equipment Association and National Standard Parts Association, Joint Show.
13-23—**Paris, France.** Commercial Vehicle Salon.
14-15—**Los Angeles.** Western Motor Clubs conference.
30-Dec. 6.—**New York city.** Automobile Salon at Commodore Hotel.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.
5- —**New York City.** National Automobile Dealers' Association convention.
8—**New York City.** Society of Automotive Engineers' annual dinner.
10-16—**St. Louis, Mo.** National Roadbuilders' show and convention.
10-17—**Buffalo, N. Y.** Automobile Show.
10-17—**Philadelphia.** Automobile Trade Association annual show.
10-18—**Newark, N. J.** Automobile Show.
11-17—**Cincinnati, O.** Automobile Show.
17-24—**Boston.** Automobile Show.
17-24—**Detroit, Mich.** Annual Show. Convention Hall.
17-24—**Baltimore, Md.** Automobile Show.
17-24—**Pittsburgh, Pa.** Automobile Show.
19-22—**Chicago.** National Wheel and Rim Association convention at Edgewater Beach Hotel.
19-24—**Detroit, Mich.** Society of Automotive Engineers' annual meeting.
19-24—**Rochester, N. Y.** Automobile Show.
24-31—**Chicago, Ill.** National Automobile Show.
24-31—**Cleveland.** Automobile Show.
24-31—**Washington, D. C.** Automobile Show
26-27—**Chicago.** National Automobile Dealers' Association convention.
31-Feb. 7—**San Francisco.** Automobile Show.

FEBRUARY

1- 7—**Minneapolis, Minn.** Automobile Show.
1- 7—**St. Paul, Minn.** Northwest Automobile Show, jointly sponsored by St. Paul and Minneapolis at the Minnesota State Fair Grounds.
3- —**Minneapolis.** Auto Trade Association convention.
7-14—**Los Angeles.** Automobile Salon.
7-14—**Kansas City.** Automobile Show.
14-21—**Omaha, Neb.** Automobile Show.
16-20—**San Francisco.** Society for Steel Treating National Western Metal and Machinery Exposition.
21-28—**San Francisco.** Automobile Salon.

TIRE RETAILERS WILL BENEFIT BY NEW PRICE BOOST

(Continued from Page 1)

dealer end of the business and to stimulate the large replacement business anticipated in 1931. Discounts to fleet owners or national accounts will revert back to the schedule in effect prior to the recent "trade war" which was terminated about the middle of September.

The importance of mail order competition has not been overlooked under the new list schedules, as it is understod that one or more important producers will continue to feature lines listed to sell at catalogue prices after providing a fair margin of profit for the retailer.

DUNLOP TIRE AND RUBBER HOLDS SALES CONVENTION

Montreal, Oct. 30.—The Montreal and Ottawa divisions of the Dunlop Tire and Rubber Goods Company, Limited, held its annual sales convention at the Windsor Hotel here. E. C. Martin, general sales manager, presided. He discussed sales plans and increasing selling possibilities of Dunlop products for 1931.

KILBOURN MOTOR SALES MOVES RETAIL SALESROOM

New York, Oct. 30.—Orrin P. Kilbourn, president of the Kilbourn Motor Sales, Inc., De Soto dealers in the metropolitan territory, announces the removal of the retail salesroom to 1360 Broadway, between 61st and 62d Streets. Service and parts departments will continue to be located in the De Soto headquarters at Service Center, 125 West End Avenue, at 65th Street.

CLARK

WE could build more, but not better axles than our present

CLARK AXLES

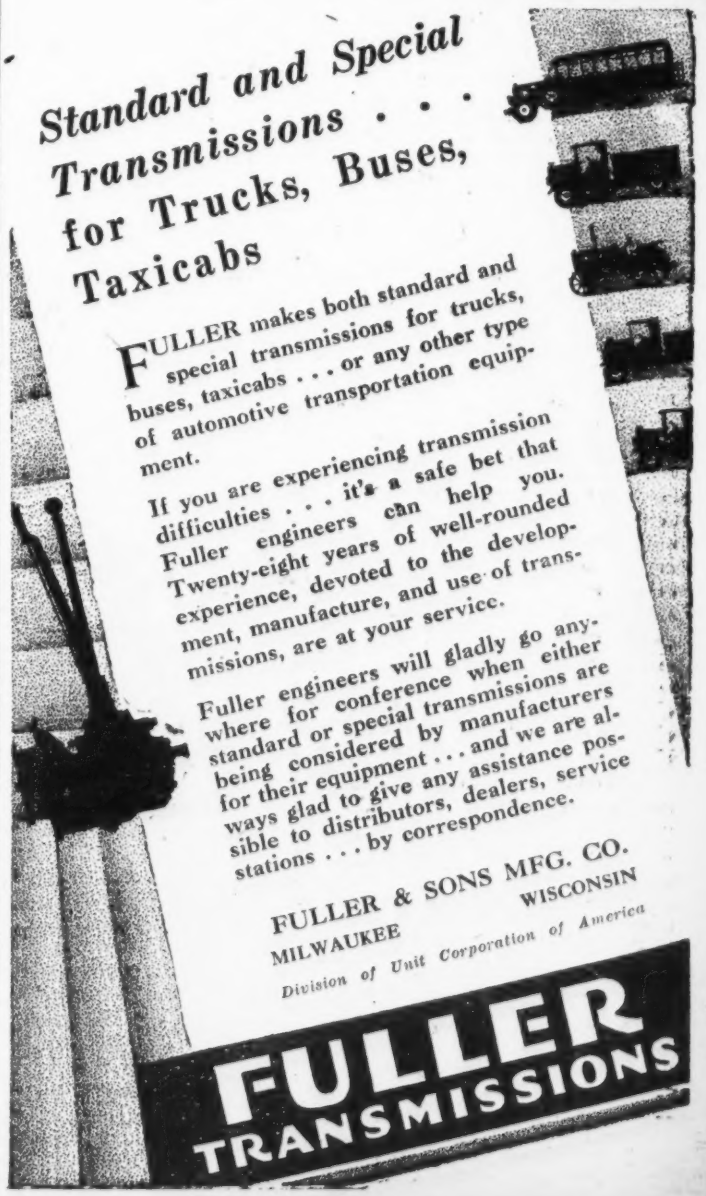
Production demands of the larger passenger vehicle and truck manufacturers have increased our axle production schedules steadily. This marks an ever-growing appreciation of the standard to which we build.

The same precision of design and workmanship produces

CLARK METAL WHEELS with Strength of Steel.

CLARK EQUIPMENT COMPANY
Buchanan Michigan.

AXLES Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS



Standard and Special Transmissions . . . for Trucks, Buses, Taxicabs

FULLER makes both standard and special transmissions for trucks, buses, taxicabs . . . or any other type of automotive transportation equipment.

If you are experiencing transmission difficulties . . . it's a safe bet that Fuller engineers can help you. Twenty-eight years of well-rounded experience, devoted to the development, manufacture, and use of transmissions, are at your service.

Fuller engineers will gladly go anywhere for conference when either standard or special transmissions are being considered by manufacturers for their equipment . . . and we are always glad to give any assistance possible to distributors, dealers, service stations . . . by correspondence.

FULLER & SONS MFG. CO.
MILWAUKEE WISCONSIN
Division of Unit Corporation of America

FULLER TRANSMISSIONS

SINSABAUGH SEES OBJECT LESSON IN HUPMOBILE BANQUET

(Continued from Page 1)

follows: Capitol Motors Company of Indianapolis, Hoppe Motor Car Company of Milwaukee, Rewerts & Ehler of Urbana, Ill.; Weber Implement and Automobile Company of St. Louis; A. B. Hall Motor Company of Lexington, Ky.; Harvey Motors of Huntington, W. Va.; Reliance Motor Company of Peoria, Ill.; W. C. Howard Motor Company of Kansas City, Harper & Harper of Binghamton, N. Y.; Englander Motor Company of Cleveland, Baggaley & Co. of Deadwood, S. D.; United Motor Car Company of New Orleans and the Gambill Motor Company of Chicago.

Quoting the program, the Hupp Company declares that "recognizing the value of the sky-road parade as a business stimulant and eager to aid the automobile and aviation industries, the following firms have co-operated wholeheartedly toward the success of this event, for which assistance the Hupp Motor Car Corporation is deeply appreciative: American Bosch Magneto Corporation, Canada Dry Ginger Ale, Inc., Chicago News, Chicago Post, Curtis Publishing Company, Electric Auto-Lite Company, Federal Pressed Steel Company, Ford Motor Company, Goodyear Tire and Rubber Company, Murray Body Corporation, National Air Transport, Pines Winterfront Company, Shell Petroleum Corporation, Standard Oil Company of Indiana, Tropic-Aire, Inc., Vacuum Oil Company and Willard Storage Battery Company."

The banquet at the Detroit Leland was attended by at least 500, with R. S. Cole, vice-president, in charge of sales of the Hupp Company, as toastmaster. President Du Bois Young made a graceful speech to his customers, declaring that "business is definitely on the upgrade. Your presence here tonight proves that—and proves that modern buyers like modern methods of salesmanship."

FORD MOTOR CO. REOPENS PLANT AT MEMPHIS, TENN.

Memphis, Tenn., Oct. 30.—The Ford Motor Company plant here has reopened, placing 1,200 men in jobs on a three-day-a-week basis. The plant has been closed about a month.

Quiet, staunch in the steady performance of their job; to haul, to stay out of the repair shop, to perform at lowest possible cost.

WISCONSIN AXLE CO.
Oshkosh Wisconsin

Cumulative New Commercial Car Registration Statistics, September, 1930

Returns for today: LOUISIANA.

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Alabama			210						240	4		2										1				457	Alabama
Arkansas			103		7				122		16				1							1			2	252	Arkansas
California	8	4	540	7	63	1		8	1534	80	61	20	5		48	1	15	25	7	13	1	23	6		104	2574	Calif.
Conn.	4	6	131	7	19	2	2	8	211	11	16	24			16		1		19	1	2	6			7	493	Conn.
Delaware	4		25		1		1		48	1	4								1							85	Delaware
Florida			140		4		1	7	295		8	3			2						1		3		2	466	Florida
Idaho			103		6				188	1	18				4		2			1			1	1		325	Idaho
Illinois	13	3	497	39	43		4	5	714	15	93	10	2	1	12	1	3	7	1		5	20	5	2	39	1534	Illinois
Indiana		5	294	3	23	7	1	1	465	18	44			2	3				7	3	3	1	3		5	888	Indiana
Louisiana			149		6				222	3	30	4										1	1		1	417	Louisiana
Maryland	5	4	113	8	14			4	223	17	19	10			13	3		1	4	3	1	11			5	458	Maryland
Michigan	1	3	392	1	50	1	2	13	1032	24	47	3	1		13	7	4	1	1	4	1	10	3		24	1638	Michigan
Minnesota		2	250	5	26	2	2	2	473	6	50				4		2			4	4	2	7	2	2	845	Minn.
Missouri		1	330	15	20	1		13	528	31	71	5	2		11	1	1		1		4	1	4	1	13	1054	Missouri
Montana			69		7		3		108	1	43	1			1		3			1		1	1		1	240	Montana
Nebraska			173		13	3			250	10	71	7	1		2		1			1		2	4		6	544	Nebraska
Nevada		1	14		6				29	2	3	1						1								57	Nevada
N. Hamp.		5	55	1	5			1	139	3	12	1			4				3	1	1		1		2	234	N. Hamp.
New Jersey	16	18	302	11	70	1	3	6	701	22	62	26	2		28	4	1	5	8	3	5	17	2	2	37	1352	N. Jersey
N. Carolina			214	1	12				277	7	13	1			1							2	3		10	541	Nor. Car.
N. Dakota			148	1	8		2		153	3	95				3		1			3		1	4		2	424	N. Dak.
Ohio	8	10	422	5	54	3	4	11	775	21	80	18	1	2	23		3	1	4	6	12	22	13	4	34	1536	Ohio
Oklahoma	1	3	200		21		1	4	228	8	18				1		2			2	2	4	3		2	500	Okla.
Oregon			89		4			5	221	5	11	3			6	3	1			1		3			9	361	Oregon
Rh. Island	2		33	1	11	1	2	5	84	10	8	9			4				2						3	175	R. Island
S. Carolina			128		3			1	179		3	4			3		1								3	325	S. Car.
S. Dakota		1	80	2	6	1	2	1	119	1	54				4		1			1			1		1	275	S. Dak.
Utah			91		5				149	13	13	2	1		5		3			2		3	1		6	294	Utah
Virginia	3	4	251		22	1	1	2	356	8	34	1	1		2	4	1	1	3		1		1		9	706	Virginia
Wash'ton			158		9	1	1		389	14	28	4	1		5		3	1				4	2	1	18	339	Wash.
W. Virginia			113		16	1		1	163	10	26		1	1	6		1				1	2	3		5	350	West Va.
Wisconsin			266	14	15	1		3	402	9	50	1		3	8			4	2	1	2	1	8		9	799	Wisconsin
Dist. of Col.	4	1	34	6	6		1	2	114	4	7	8				2	1				1	4				195	D. of C.
Totals	69	71	6117	127	575	27	33	103	11131	362	1108	168	18	9	233	26	51	47	63	51	47	143	80	13	361	21033	Totals
Ala., '29		1	506		3			1	184	4	2											2	5			708	Ala., 1929
Ark., 1929		2	296		12		7		232	4	43	3		2	2		1			1	15	4			2	626	Ark., '29
Cal., 1929	24		481	3	187	3	15	21	1243	54	41	16		2	82	3	16	23	8	14	9	38		1	103	2387	Cal., 1929
Conn., 1929	5	7	162	11	50	5	8	6	247	31	25	26			39		2	2	9	3	6	15		2	12	673	Ct., 1929
Del., 1929	1		42		2			1	42	3	5	3							1		2	1				103	Del., 1929
Fla., 1929		4	141		17		1	1	237	4	17	7			7					2	1	5				444	Fla., 1929
Idaho, '29			148	1	25		5		158	12	36			1	6		11	3		1	1	4			1	413	Idaho, '29
Illinois, '29	10	5	590	51	127	2	16	12	916	20	165	8			53	1		2	1		41	18			106	2144	Ill., 1929
Ind., 1929	7	20	467	7	72	2	4	1	599	37	75			4	29		1		7	16	35	4		1	9	1397	Ind., '29
La., 1929			322		18	1	2		420	13	60	2			6						1	10			8	863	La., 1929
Md., 1929	17	12	171	13	38	1	6	6	233	16	38	18			21	2		12	6		7	32			10	659	Md., 1929
Mich., 1929	9	2	726	2	104	9	31	41	1380	67	104	8		1	81	8	1			46	9	2			31	2662	Mich., '29
Minn., 1929			319	4	36	1	12	5	519	13	112	13			18						17	12			15	1096	Minn., '29
Mo., 1929	3	8	454	9	49	2	10	10	561	23	65	10		1	15	2	1	5	1	4	33	4		2	6	1278	Mo., 1929
Mont., 1929			156		20		9	1	203	6	68				5	1	3			1	20	5				498	Mont., '29
Neb., 1929			257	3	16		9	1	235	10	94	1			5		1				23	2			5	662	Neb., 1929
Nev., 1929	1		14		8		1		34	3	2									1	1	1			6	72	Nev., 1929
N. H., 1929	1	2	80		18	1	4	2	97	3	5	3			10				1		2				2	231	N. H., '29
N. J., 1929	12	22	460	10	140		16	7	663	44	57	50		1	46		4	8	4	5	13	37		2	52	1653	N. J., '29
N. C., 1929			395		40	2	8	1	476	17	42	7			3	3	2				13	9		1	20	1039	N. C., '29
N. D., 1929			288	2	27		9	1	285	16	165				3		2				15	1		1		815	N. D., '29
Ohio, 1929	8	31	719	4	121	7	19	7	901	53	108	25		4	57	1	9	1	9	3	61	41		6	47	2242	Ohio, '29
Okla., 1929	2	6	383	3	52		12	7	331	8	49	3			8	1	1		1	4	16				4	891	Okla., '29
Ore., 1929			114		32		3	4	195	16	20				9	1	2	3			5	5			16	424	Ore., 1929
R. I., 1929	4	2	71	2	38		2	2	85	22	7	7			21		1	2	4	1		3			3	277	R. I., 1929
S. C., 1929			210		13		4	2	187	8	13	1			1		1			1	3	6				450	S. C., 1929
S. D., 1929			153	1	12		4		117	4	101	1			12		2			3	16				1	427	S. D., '29
Utah, '29			98		12		2		214	8	14	1			8		8			2	3	1			1	372	Utah, '29
Virginia, '29	8	7	470		38	1		1	490	21	46	6		1	16	6			4	1	14	7			13	1150	Va., 1929
Wash., 1929			173		31		9		380	16	26	3			18	2	10	1		2	10	10			32	723	Wash., '29
W. Va., '29		6	155	1	42	1	7	3	155	17	30			1	14	3	1				9	1			5	451	W. V., '29
Wis., 1929	1		299	14	34	1	9	5	373	20	60			3	21		1	2	3	1	28	4		1	16	896	Wis., '29
D. of C., '29		1	32	2	3	1			121	12	2	1			4				5		1	5			2	192	D. C., '29
Totals	113	138	9352	143	1437	40	244	149	12513	604	1697	223	*	21	620	34	81	64	64	112	432	292	*	17	528	26918	Totals

*Not in production at that time.

First City-Wide Used Car Show Held in Birmingham

BIRMINGHAM, Ala., Oct. 30 (UTPS).—The first city-wide used car show was staged here last week and was declared so successful, considering business conditions, that dealers are thinking seriously of making the affair a semi-annual one.

A lot was secured in what is known as "Birmingham's Automobile Row," and lights were installed for artificial illumination. An orchestra was on hand every night to entertain the public. The show opened on Monday and closed the following Saturday night.

Gaily colored lights strung on wires across the lot, giving it the appearance of a gay carnival, together with the music, set the people attending the show in a buying mood.

Arrows directing the people to the show were placed on light poles throughout the city so that there would be little trouble in finding the place. Show cards were placed in merchants' windows downtown describing the event, and considerable newspaper space was used by the various dealers.

Practically every dealer in Birmingham co-operated in the show. Approximately 250 of the best used cars in the hands of dealers were placed on display from 10 a. m. to 11 p. m.

Dealers found that this was one of the best methods used in Birmingham in a number of years of disposing of the surplus stock of cars before the winter season.

A check on number of sales made at the show has not yet been released by the officials of the show, but sales managers all agree that the stunt was worth while, if for no other reason than the advertising toward establishing the used car idea in the public's mind.

Dealers participating in the show were Redmont Motor Company, Lincoln dealer; McConnell Motor Company, Adamson Motor Company, Crawford Auto Shop and Hanna Mortor Company, Ford dealers; Brownell Auto Company, Oldsmobile; Pryor Motor Company, Willys-Overland; L. H. Pennington, Graham; McCormack Brothers, Packard; Drennen Motor Company, Buick; Adams Motor Company, Cadillac; J. F. Oates, Chrysler; Edwards Motor Company, Wood Chevrolet Company, Chevrolet; Scouten Motor Company, Studebaker, and Jefferson Motor Company, Hupmobile.

HARTOL REFINING ADDS H. B. BETTS TO STAFF

New York, Oct. 30.—H. B. Betts former sales manager of the Eastern department of the Tide Water Oil Sales Company and for many years associated with that organization, has joined the staff of the Hartol Refining Company, the retail marketing subsidiary of Hartol Products Corporation, 117 Liberty St. here. A short time ago E. T. Dodds, formerly with the National Petroleum News, joined the staff of the Hartol organization and is now in charge of New York state.

HAILE MOTOR COMPANY SUES DURANT MOTORS, INC.

Buffalo, N. Y., Oct. 30.—The A. W. Haile Motor Company, established here since 1912, has announced the beginning of a suit against the Durant Motor Company for breach of contract. The Haile organization has been western New York and northern Pennsylvania distributor for Durant Motors since June, 1929. It has been operating under the group that took over control of operations on January 1, 1929.

ELLISON BRONZE CO. BUSINESS IMPROVES

Falconer, N. Y., Oct. 30.—Marked improvement in new business has been recorded this month at the plant of the Ellison Bronze Company here, and output has been stepped up to close to capacity. Incoming orders are in larger volume and quantity and the company expects to maintain current production schedules throughout the balance of the year.

WM. A. GRAF ACQUIRES BUFFALO SERVICE PLANT

Buffalo, N. Y., Oct. 30.—William A. Graf has acquired the plant and service station, featuring a full line of automobile accessories and equipment, at 1624 Main St., operated under the name of Youll's Auto Service. Operation of the establishment under the same trade name will be continued by Mr. Graf.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

LEADING OSHKOSH DEALERS SPONSOR NEWSPAPER ADS "REPAIRING FOR WINTER"

Oshkosh, Wis., Oct. 30.—A full page advertisement in a local daily calling attention to the desirability of having one's automobile overhauled before the winter season sets in was sponsored recently by five leading automotive dealers in this city.

Caption on the advertisement read as follows: "Be prepared before you take the winter jump. Have an established automobile headquarters check and prepare your car for cold weather driving."

Sponsoring dealers included Baranowski Auto Company, Hudson-Essex, Chrysler and Plymouth dealer; Faust Motor Company, Oakland-Pontiac; Winnebago Auto Company, Ford, Lincoln; Linley Nash Company, and the Valley Motor Sales, Graham.

W. A. NORDSTROM, INC., TO EXPAND SALES PERSONNEL

Jamestown, N. Y., Oct. 30.—Henning A. Nelson, who recently acquired a controlling interest in the firm of W. A. Nordstrom, Inc., wholesale and retail automobile accessory, battery and tire concern, with headquarters in Fenton Place, here, has plans under way for enlargement of facilities and expansion of sales personnel. The company specializes in Exide batteries, Kelly tires and AC spark plugs.

GEORGE BERGERON NAMED BY LEGARE SUPPLY CO.

Montreal, Oct. 30.—Legare Automobile and Supply Company, Ltd., has announced the appointment of George Bergeron as general sales manager in executive charge of sales for all thirty-five branches of the company located in provinces of Quebec and eastern Ontario.

AUTO OWNERS' SUPPLY CO. LEASES NEW BUILDING

Chicago, Oct. 30.—The Auto Owners' Supply Company, for many years located at 2115 South Michigan Ave., has leased from the estate of Stamford White the entire three-story building at 2035 South Michigan Ave.

CUMULATIVE NEW PASSENGER CAR

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising desiring county, city or town lists, or lists of owners in any given Some of this data has been published previously, but it is

States	Auburn	Austin	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Alabama			52		463	19		3	7		2	748			7	2	7			2
Arkansas	1		27	2	324	25		8	21	12	10	429			7	1	2		5	1
California	76	124	1238	216	2829	368	8	255	262	281	202	6389	41	4	198	151	101	1	148	36
Conn.	23	7	271	35	459	96	3	73	83	13	89	854	17		38	44	41	2	35	4
Delaware		3	75	9	96	18		4		7	11	195	1		1	8	3		4	3
Florida	6	30	110	7	642	53	2	11	19	9	46	847	4		38	22	8		3	6
Idaho	1	4	44		209	14		12	19	16	10	295			8	6	1		1	2
Illinois	43	35	783	107	2167	310	12	158	206	31	176	3688	60	5	132	110	78		110	30
Indiana	29	22	309	24	1036	98	3	69	68	9	86	1594	8		58	61	33	3	18	5
Louisiana		9	46	6	493	37	1	22	49	3	23	840	8	1	23	12	10		3	4
Maryland	2	2	182	13	731	49	1	17	22	12	41	867	15		30	23	21	1	8	4
Michigan	7	30	817	144	1507	142	3	44	103	43	195	3666	1		83	136	46	1	62	23
Minnesota	5	8	216	6	1010	78		25	38	20	50	1350	1		42	36	24		16	5
Missouri	18	25	311	36	1248	79	2	37	82	30	103	1802	19	7	54	37	28		14	4
Montana	3	1	41	3	136	17	1	7	9	5	19	159	4		4	8	4		2	
Nebraska	3	18	165	4	948	69		13	57	8	36	1316	2	4	12	6	10		3	6
Nevada	3	2	22		62	15		7	17	5	7	107	1		6	9	2		3	1
N. Hamp.	4	5	91	4	178	27		16	18	9	21	321	4		9	7	10		1	2
N. Jersey	41	41	783	72	1394	222	4	57	104	31	169	2495	36	3	81	112	88	8	56	17
N. Ca'lina	2	4	120	10	667	72		12	28	7	28	1193	6		10	22	4		3	2
N. Dakota		4	64		354	16	1	7	11	14	23	438	1		10	7	2		1	
Ohio	42	21	608	67	1827	227	7	117	136	66	220	3295	48	4	105	131	61	9	44	14
Oklahoma	3	23	193	18	991	33		10	80	12	20	1217	10		13	11	9		9	3
Oregon	2	13	110	1	267	23		18	16	38	22	503	4		22	18	7			
Penn.	39	64	1181	84	2548	558	7	218	306	118	326	4343	59	2	221	201	144	7	90	22
Rh. Isle.	6	1	93	15	172	51		31	24	12	24	313	5	1	16	13	13		10	3
S. Ca'lina	1	9	49	3	390	13		13	18	1	9	622			1	10	3		1	2
S. Dakota	1	3	50	1	418	24		3	39	17	19	487	3		9	5	10			2
Utah	9	2	58	6	209	8	3	13	19	19	23	320	4		19	6	4		3	1
Vermont	2		55	2	106	20		3	15	4	23	200	1		8	13	7		3	1
Wash'gton	8	17	250	8	434	71		48	37	62	37	1006	11	1	18	29	37	1	9	2
W. Va.	7	1	78	5	444	51		15	49	13	35	723	9		21	16	13		6	4
Wisconsin	14	10	362	15	1103	119	2	58	64	24	89	1504	9	1	46	72	22		13	4
D. of Col.	5	6	109	22	283	28		10	16	10	23	680	3		24	13	19	1	11	5
**Totals	406	544	8963	945	26145	3050	60	1414	2042	961	2217	44806	395	33	1374	1358	872	34	695	220
Ala., '29			92	1	1122	29		9	16	1	15	2184			11	5			3	2
Ark., '29	1		55	2	541	36		18	45	8	24	1071	1		24	8	8		3	1
Cal., '29	74		1657	147	3551	645	25	441	620	495	570	7708	77	22	476	340	301	1	206	60
Conn., '29	52		399	43	632	195	5	115	187	21	220	1064	37	5	103	89	86	3	64	10
Dela., '29	3		71	4	138	12	1	2	4	17	18	234	2		1	7	15		12	2
Florida, '29	2		99	5	696	56	1	27	46	5	76	1344	11		49	33	23	1	8	
Idaho, '29	2		70		371	28		30	36	67	29	678	1		19	16	10		1	
Ill., '29	106		1416	115	3230	580		322	519	135	614	6261	58	12	373	333	394	10	192	49
Ind., '29	75		466	22	2008	203	10	239	223	46	420	3474	9	2	126	143	86	3	40	6
La., '29	5		168	3	1201	74		78	145	4	56	2360	3	4	40	21	38		9	4
Md., '29	5		235	13	827	95	2	40	58	25	152	1182	16		53	56	67	1	18	6
Mich., '29	41		1964	140	3335	526	10	337	318	172	808	7183	10		361	276	429	12	218	31
Minn., '29	21		244	5	1185	145	4	66	76	65	178	2394	2	8	90	60	67	1	12	2
Mo., '29	27		440	24	1912	121	4	81	189	90	246	3137	7	14	93	59	98	3	44	6
Mont., '29	9		86		345	45	1	28	49	24	51	547	10		20	23	15		6	
Neb., '29	6		239	9	1404	94		43	118	76	73	2254	2	4	67	25	36		9	3
Nevada, '29	3		36	4	63	16	2	9	18	15	14	107	2		5	12	1		3	2
N. H., '29	9		97	1	205	24		35	21	22	58	368	12		31	15	11			1
N. J., '29	104		1032	66	1615	434	6	193	210	70	404	2901	50	9	203	201	234	12	110	19
N. C., '29	3		293	9	1363	168		74	133	31	149	3062	2		49	61	18		15	5
N. D., '29	2		117		645	43		17	42	31	49	1202	1		32	24	14		1	
Ohio, '29	82		1137	71	3399	437	14	363	291	169	880	6218	62	14	301	295	381	22	97	32
Okla., '29	15		399	8	1554	112	1	64	229	18	72	2690	9		51	39	46		31	4
Oregon, '29	7		106	3	537	54		36	44	121	87	1027	12	3	28	27	21		6	3
Penn., '29	123		1521	84	3048	894	22	376	470	220	875	6242	79	10	476	335	485	32	152	45
R. Isle., '29	13		136	17	213	97	3	79	49	14	71	351	18	2	42	27	26	1	22	
S. C., '29			73	1	764	40		39	33	5	39	1380	2		8	16	6		1	1
S. D., '29	2		104		732	43		13	82	56	58	1197			30	17	32		1	1
Utah, '29	21		77	8	297	19	3	36	35	60	59	617	11		30	34	27		5	1
Vt., '29			62	2	118	41		16	23	8	57	232	8		32	25	19		7	1
Wash., '29	20		237	11	781	147	6	120	114	192	180	1752	11	1	73	62	78	5	18	3
W. Va., '29	8		167	7	651	85		43	91	33	110	1101	7		62	37	38	1	16	5
Wis., '29	14		614	18	1596	226	3	110	165	96	313	2819	9	3	167	131	97		22	11
D. of C., '29	10		156	16	277	60		9	26	9	79	688	13		45	23	37	1	12	9
**Totals, '29	865	*	14065	859	40356	5824	123	3508	4725	2421	7104	77068	554	113	3571	2975	3244	109	1364	325

*Not in production at that time. **All totals revised today.

Uses Big White Streamers To Advertise Service Work

AN INTERESTING line-up of operations to prepare cars for winter driving is announced on big white streamers with red and black lettering, on or in the four lubricating stations operated in Philadelphia by Earl Mylecraine, lubrication specialist, who also sells certain lines of automotive supplies, as well as additional service, such as washing, Duco, nickel and body polishing and vacuum cleaning. The Mylecraine stations are the only ones here making the announcement in this particular way. The signs appear at 5509-13 Walnut St., 523-25 South Broad St., 5705-7 Greene St. and 1333-7 Olive St., as follows:

CARS MADE READY FOR WINTER DRIVING

WINTER LUBRICATION: Light Oil—Non-Congealing Grease
RADIATOR ANTI-FREEZE
ALCOHOL GLYCERINE
PRESTONE

CARE
SAVES
YOUR
CAR

} Pines Automatic Winterfronts
} Now $15 and $20 Only.
} New Vertical Type,
} New Closing Device.

HEATERS: Tropic-Aire, $37.50, $31.50, $27.50.
KARI-KEEN, $19.50.

Small folders, descriptive of the lubrication and washing processes used are distributed among customers and prospects.

TO ABANDON LINE

New Castle, Pa., Oct. 30.—The Pittsburgh, Harmony, Butler & New Castle Railway Company has been authorized by the Public Service Commission to abandon its line within the city limits.

Ford Sales at High Level In San Francisco District

SAN FRANCISCO, Oct. 30 (UTPS).—The Ford dealers of the San Francisco district find that, even though there has been a regular cloudburst of new models in the automobile field, they are able to keep up their sales to satisfactory levels. Several of the dealers are securing good results through the use of unusual or striking publicity methods.

Because so many thousands of San Francisco employers and employees live across the bay and travel back and forth by ferries, the Dietz Motor Company, Ford dealer at 2318 Central St., Alameda., finds that a slide appearing on an advertising screen in the waiting rooms of the Ferry Building, San Francisco, produces good business. By this method, within each twenty-minute waiting period, the Dietz Motor Company slide, offering current Ford bargains, appears four times. A number of other non-competitive firms' slides also appear, and public attention is practically guaranteed, as the slides are "cut in" at intervals on a regular silent movie, the film being changed once a week. The daily cost to each advertiser is surprisingly low.

William L. Hughson, 1499 Market St., San Francisco, announced his "annual used car sale" this past week by the use of a calliope suitably decorated with signs and banners. The calliope itself, by the way, was mounted on a "used Ford."

George A. Wolfe, 3160 Mission St., San Francisco, one of the newest of the San Francisco Ford dealers, but a veteran in Ford sales in and around Fresno, where he owned a Ford dealership, reports that he finds business in both new and used cars very good. Says the firm:

"We find so many of the working class—who are the most numerous purchasers of the Ford—with only three or four days out of each week at their employment. This means that it is difficult to sell. Yet, in spite of this condition, we have been successful in keeping our sales strictly on a sound business basis—we have made no 'Chinese' sales, that is, sales with a lot of strings attached. And business is good—we make it good!"

REGISTRATION STATISTICS, SEPTEMBER, 1930

Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers section, may obtain these by addressing any of these three companies given here complete for the convenience of our subscribers

States	Marmon	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Windsor	Miscellaneous	Totals
Alabama				1	6		1	24	5	2	12				2	1			1,366
Arkansas	1	16	3	4	1			38	13	3	8		2	4	2	1			971
California	59	356	128	134	254	14	45	235	255	65	573	2	20	96	102	81	48	10	15,405
Conn.	21	72	58	39	75	1	15	69	109	19	100	2	4	10	27	12		7	2,827
Delaware	2	4	8	3	9			14	15		7			3	5	1		1	510
Florida	13	24	21	15	15		2	63	56	6	11		3	13	6	2			2,113
Idaho	1	17	4	5				27	7	4	12			7	2	3			731
Illinois	60	228	85	186	201	8	42	331	356	46	401	12	18	40	114	60	5	12	10,446
Indiana	82	66	36	98	30	3	4	193	165	14	166	1	7	29	90	10			4,527
Louisiana	9	69	13	12	12	1	1	50	52	2	43		3	4	7	8			1,876
Maryland	7	53	13	30	19	2	7	81	99	21	52			11	17	7	3	1	2,464
Michigan	41	89	99	143	121	4	10	308	227	82	162		45	65	95	20	1		8,565
Minnesota	11	54	25	33	28	4	3	213	127	11	94		2	42	58	15			3,650
Missouri	16	110	46	88	39	1	17	166	133	20	91	1	1	39	58	15	12	2	4,791
Montana	2	10	6	3	1		1	18	12	2	12			3	7	4			504
Nebraska	3	33	13	32	11		1	162	74	3	82		3	29	62	9			3,197
Nevada	2	4	1	2	2			7	7		6		1		4	1			306
N. Hamp.	14	41	8	22	15	1	2	41	29	9	30		1	4	15	5			964
N. Jersey	41	212	109	165	172	12	55	167	198	44	267	4	10	30	77	61		1	7,439
N. Ca'lina		25	4	14	6		4	72	52	3	18		1	13	9	5			2,416
N. Dakota	7	25	8	8	1			45	43	4	24		2	27	35	4			1,186
Ohio	87	242	135	167	138	23	25	400	338	48	256	4	19	114	240	59	2	3	9,349
Oklahoma	4	44	22	21	11		8	82	74	1	34		3	32	23	4	3		3,021
Oregon	5	17	7	16	11		3	41	29	11	42		2	6	4	12			1,270
Penn.	93	376	179	234	256	20	46	766	412	79	391	2	13	83	281	98	10	5	13,882
Rh. Isle.	5	22	6	21	13	3	13	35	36	16	29			6	12	19			1,039
S. Ca'lina		10	9	5	5			29	17	5	11			1					1,237
S. Dakota	6	17	9	49	4			61	31	4	28		3	11	19	3			1,336
Utah	1	27	7	6	7		1	13	26	7	22		2	5	5				855
Vermont		23	11	10	8	1	1	38	23	5	9			11	17	6		2	628
Wash'gton	8	34	15	43	33	3	3	115	76	20	90		2	19	42	21			2,610
W. Va.	12	28	23	26	13		1	95	90	23	30	1		25	53	12			1,922
Wisconsin	22	184	68	83	26	2	12	217	225	21	184		10	47	109	15		1	4,757
D. of Col.	12	16	24	30	32	16	6	49	57	6	47		4	7	10	7		5	1,596
Total	647	2548	1203	1748	1575	119	329	4265	3468	606	3344	29	181	836	1609	581	84	50	119,756
Ala., '29		9	2	4	5		2	21	15		53			26		1			3,628
Ark., '29	1	21	3	9	6		3	69	50	2	21		2	54		4		4	2,095
Cal., '29	96	586	163	354	377	39	63	277	525	125	791	23	44	177		302	4	126	21,488
Conn., '29	46	121	47	77	138	16	24	88	191	54	126	2	3	79		45		31	4,418
Dela., '29	1	22	7	9	17		2	16	28		8			18		9			680
Florida, '29	7	29	11	26	19		1	30	64	10	18		3	58		6		6	2,770
Idaho, '29	2	28	8	22	3			41	32	6	29			36		5		1	1,571
Ill., '29	131	450	188	503	445	51	38	508	805	94	513	34	51	457		132	16	72	19,207
Ind., '29	111	130	66	281	69	11	11	217	470	22	236	12	26	291		51	1	19	9,625
La., '29	16	82	17	47	13	8	4	105	184	3	45		2	58		17			4,814
Md., '29	12	77	26	77	53	6	12	77	161	16	62	2	3	68		18		1	3,522
Mich., '29	104	141	127	519	341	11	18	453	574	123	325	6	37	423		103	4	69	19,649
Minn., '29	15	56	36	91	60		5	207	207	7	103	6	3	217		38	2	8	5,686
Mo., '29	35	138	40	170	82	9	33	161	237	11	134	9	12	300		38	5	6	8,015
Mont., '29	13	47	9	21			2	68	51	3	32		3	59		17		2	1,586
Neb., '29	17	74	24	105	14	1	4	215	196	6	71		3	198		31		2	5,423
Nevada, '29	6	13	1	15	4			9	6	3	12		1	5		2		1	390
N. H., '29	17	50	15	32	18			35	42	9	45		2	49		16			1,240
N. J., '29	90	407	87	233	363	36	63	175	347	45	369	6	22	161		178	4	14	10,473
N. C., '29	25	71	30	70	23	1	1	139	159	2	47	1	5	123		12		1	6,145
N. D., '29	31	71	25	32	4			89	85	1	41		2	117		20		1	2,739
Ohio, '29	133	371	145	512	257	147	29	370	708	59	391	30	25	613		205	2	19	18,281
Okla., '29	10	67	51	57	38	2	3	114	217	24	89	2	2	187		17	5		6,218
Oregon, '29	17	38	16	36	15		3	69	68	15	64		5	23		21		2	2,514
Penn., '29	155	548	171	504	521	58	98	573	712	69	510	22	25	515		241	13	23	20,247
R. Isle., '29	4	40	9	26	24	8	11	27	62	31	33		5	30		35		3	1,529
S. C., '29	21	13	13	20	11			46	63	4	14		4	20		2			2,639
S. D., '29	10	34	10	79	6	1		108	80	4	51		9	152		12		2	2,926
Utah, '29	7	58	11	40	17			10	24	5	23	2	2	23		5			1,567
Vt., '29	12	37	7	10	7	2	1	35	36	3	18	4		34		15			872
Wash., '29	31	75	36	105	44	7	5	144	116	14	137	3	13	108		60		1	4,750
W. Va., '29	33	66	14	56	19	3	4	67	94	7	56	6	3	108		18		1	3,017
Wis., '29	44	219	81	202	55	18	18	276	405	23	230	4	13	304		55		18	8,378
D. of C., '29	15	32	9	68	69	22	6	27	72	2	44	1	3	19		11	1	22	1,893
Total, '29	1268	4221	1505	4412	3137	457	464	4866	7086	802	4732	175	333	5110	*	1742	57	455	209,995

NOVEL CAR SELLING CONTEST IN ALLIANCE

By REX M'CONNELL

A NOVEL car selling contest is in progress at the H. G. Williams Chevrolet Sales, Alliance, O., with winners to be rewarded with a trip to the Pennsylvania mountains during the deer season with all expenses paid by the company.

Twenty-three employees of the Williams Company are competing in the contest. The contest is not confined to the sales organization, but mechanics, helpers and members of the office force are active in this unique car-selling scheme.

A large chart has been posted in a conspicuous place in the sales department. On it are listed twenty-three members of the organization who are engaged in the car-selling contest.

The plan has to do with bonuses, $5 in cash being given each person in the organization who is successful in negotiating a car sale, either new or used, in which $200 or more in cash difference is involved. For a cash difference under $200 the contestant is allowed a $2.50 bonus. When a total of $35 in bonuses has been registered, the contestant is eligible for the deer hunt.

The chart shows the progress each day of each contestant. A small label with a running deer marks the exact status each day of each person in the contest. When the goal is reached a small label showing a hunter shooting at a deer is posted, indicating that this contestant has attained the goal.

Much interest has been created in the stunt and from all indications more than 50 per cent. of the firm's organization will accompany Mr. Williams into the Pennsylvania mountains in quest of deer this fall.

Since mechanics and others not affiliated with the sales department do not have the same opportunity that the full-time salesmen have, they are given the same bonus on a lesser sale ratio.

SERVICE ASS'N HOLDS OCT. MEETING AT PHILADELPHIA

Philadelphia, Oct. 30.—The Automotive Service Association held its October meeting on the night of October 27, in the quarters of the Philadelphia Automobile Trade Association, 715 North Broad Street, the dinner and business session being well attended.

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
*Am La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	DR	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	CS	Zen	Vac	AB	Own	C	4	Own	2R	47.4	4	R	160	7200	S36x5	S36x5D
*Am La Fran.Chieftain	3-4	5500	Own	6	4⅛x5⅛	40.8	Pw	Zen	Vac	DR	Own	C	4	Tim	Wo	28.8	4	D	175	7200	S36x8	36x8D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	54.4	4	R	165	9800	S36x5	S40x6D
Am. La Fran. Big Chief	6	6725	Own	6	4½x6	48.6	Pw	Zen	Vac	DR	Own	C	4	Own	2R	32.8	4W	D	226	10600	S40x8	S40x8D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	—	63.5	4	R	165	10500	S36x7	S40x8D
Austin	—	*	Own	4	2.2x3	7.8	CS	Til	—	Aut	W-G	U	3	Sal	Sp	—	4	4	75	——	3.75x18	3.75x18
Autocar A	1½-2	3200	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SA	Sp	27.9	4	R	150	5060	34x7	34x7
Autocar D	2-2½	3500	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SD	2R	33.7	4	R	150	5300	34x7	34x7D
*Autocar SH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Gra	LN	Own T	U	4	Own H	2R	44.3	R	R	114	6770	34x7	34x7D
Autocar SCH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Vac	LN	Own T	U	4	Own H	2R	44.3	R	D	157	6860	34x7	34x7D
*Autocar H	3	4100	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own H	2R	48.6	R	R	114	6770	34x7	34x7D
*Autocar HS	3½	4600	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
*Autocar SHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Gra	LN	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
*Autocar SCHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Vac	LN	Own T	U	4	Own C	2R	53.6	R	D	157	8180	40x8	40x8D
Autocar TEA	3-3½	5350	Own	6	4¼x4¾	43.4	Pw	Str	Vac	LN	Own T	U	12	Own TE	2R	101.7	4	D	192	8900	36x8	36x8D
Autocar TFA	3½-5	6100	Own	6	4½x4¾	48.6	Pw	Str	Vac	LN	Own T	U	12	Own TF	2R	101.3	4	D	192	9300	38x9	38x9D
Autocar C	3½-5	5500	Own	6	4½x4¾	48.6	Pw	Str	Vac	LN	Own B	C	4	Own C	2R	61.7	R	D	172	9500	42x9	42x9D
Autocar F	7½	6800	Own	6	4½x4¾	48.6	Pw	Str	Vac	LN	Br-L 70	C	7	Tim	Wo	94.0	4	D	173	11000	36x7S	40x8DS
Autocar G	10	9000	Own	6	4½x4¾	48.6	Pw	Str	Vac	LN	Br-L 70	C	7	Tim	Wo	97.7	WB	D	171	13000	36x8	36x8D
Brockway 60	1	995	Con	6	3⅜x4	27.3	Pb	Zen	P	Aut	W-G	U	3	Col	Sp	—	4	Tr	132	3200	30x5	30x5
Brockway 65	1	1195	Con	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L	U	3	Col	Sp	—	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	149	3650	32x6	32x6
Brockway 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Brockway 140	2-2½	2495	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	156	5500	32x6	32x6D
Brockway 141	2½	2935	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4	D	170	6200	32x6	32x6D
Brockway 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Brockway 175	3	3660	Con	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	—	U	5	Wis	2R	—	4	D	170	7200	34x7	34x7D
Brockway 195	3-3½	3820	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Brockway 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Brockway 220	3½-4	4560	Con	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Brockway 250	5	5950	Con	6	4⅜x4¾	45.9	Pw	Zen	P	Aut	Br-L	U	4	Tim	Wo	—	4HV	D	182	10000	40x8	40x8D
Brockway 290	7½	7250	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7P	40x14S
*Brockway 640	10	9700	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	212	14000	38x7P	36x10S
Chevrolet	½	365	Own	6	2⅛x3¾	26.3	CS	Car	P	DR	Own	U	3	Own	Sp	13.61	4	R	107	1835	4.75x19	4.75x19
Chevrolet	1½	520	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	4	Own	Sp	33.46	4	R	131	2375	30x5	30x5
Commerce Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 54006	Sp	29.2	4	D	162	4500	32x6P	32x6D
Commerce Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4	D	168	4900	36x6	36x6D
Commerce Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4	D	168	5100	36x6P	36x6D
Commerce Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4	D	175	7000	36x6P	36x6D
Commerce Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4	D	175	7100	36x6P	36x6D
Commerce Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B	D	175	8200	36x6S	36x12S
Commerce Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B	D	175	8400	36x6S	36x12S
Commerce Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 68700DP	Wo	95.0	B	D	175	9600	36x6S	40x14S
Day Elder 60	1	1195	Con 25 A	6	3⅜x4	27.3	Pw	Zen	P	DR	W-G	U	4	Tim	Sp	36.3	4	R	135	3200	20x6.00B	20x6.50B
Day Elder 85	1½	1645	Con 16 C	6	3⅜x4⅝	27.3	Pw	Zen	P	DR	W-G	U	4	Tim	Sp	42.3	4	R	135	3750	20x6.00	20x6.50DB
Day Elder 110	2	2095	Con 16 C	6	3⅜x4⅝	27.3	Pw	Zen	P	DR	Br-L	U	4	Tim	Sp	44.9	4	D	156	4600	20x7.00	20x7.00DB
Day Elder 130	2½	2895	Con 16 R	6	4 x4⅛	38.4	Pw	Zen	P	DR	Br-L	U	4	Tim	Sp	40.7	4	D	150	6300	20x7.50B	20x7.50DB
Day Elder 160	3	3695	Con 18 R	6	4 x4½	38.4	Pw	Zen	P	DR	Br-L	U	4	Tim	Wo	36.1	4	D	156	6600	20x7.50B	20x9.00DB
Day Elder 200	4	4295	Con 18 R	6	4 x4½	38.4	Pw	Zen	P	DR	Br-L	U	4	Tim	Wo	43.5	4	D	156	7400	20x9.00B	20x9.00B
Day Elder 240	5	5500	Con 21 R	6	4⅜x4¾	45.9	Pw	Zen	Vac	DR	Br-L	C	4	Tim	Wo	50.8	4	D	162	9300	38x9P	38x9DP
Day Elder 285	8	6000	Con 21 R	6	4⅜x4¾	45.9	Pw	Zen	Vac	DR	Br-L	C	7	Tim	Wo	71.2	6	D	164	12000	20x8.25B	20x8.25DB
Day Elder 345	10	7500	Con 21 R	6	4⅜x4¾	45.9	Pw	Zen	Vac	DR	Br-L	C	7	Tim	Wo	79.9	4	D	164	12500	20x9.00B	20x9.00DB
Day Elder 402	12	8500	Con 16 H	6	4⅜x5¾	54.2	Pw	Zen	P	DR	Br-L	C	7	Tim	Wo	84.6	4	D	164	14000	20x9.75B	20x9.75DB
Diamond T 200	1	785	Bud	4	3¾x4½	22.5	*Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	128½	3050	30x5	30x5
Diamond T 215	1	885	Bud	6	3⅜x4	27.3	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	135⅛	3150	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	160¾	4850	32x6	32x6D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6D
Diamond T 506	2½	2820	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	2R	—	4	D	172½	6300	34x7	34x7D
Diamond T 504	3	2925	Her WXC 2	6	4¼x4½	43.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	2R	—	4	D	166½	6400	20x8.25B	20x8.25DB
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	2R	—	4	D	186	7500	36x8	36x8D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	R	D	162	8100	S36x5	S36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	C	7	Own	Wo	—	6WH	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	4	Tim	Wo	—	R	D	170½	9700	S36x6	S40x12
Diamond T 1200	6	5600	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	180	11000	34x7	4 w h 34x7D
Diamond T 1600	8	6220	Her YXC 3	6	4⅝x4¾	51.3	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	190	11700	36x8	4 wh 36x8D
Diamond T 1601	8	7500	Wak 6 R B	6	5 x5¾	60.0	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	12500	36x8	4 wh 36x8D
Diamond T 2500	10-12	8000	Wak 6 R B	6	5 x5¾	60	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	13100	S36x7	4 wh 36x12S
Dodge Bros. UF10A	½	435	Own	4	3⅝x4¾	21.2	Pb	Car	P	DR	Own	U	3	Own	Sp	14.28	4	D	109	1855	5.00x19	5.00x19
Dodge Bros. F 10 A	½	515	Own	6	3⅛x4⅛	23.4	Pb	Car	P	DR	Own	U	3	Own	Sp	14.28	4	D	109	1960	5.25x19	5.25x19
Dodge Bros. U-1	¾	695	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	21 68	4	D	124	2260	5.50x20B	5.50x20B
Dodge Bros DA1	¾	795	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	140	2955	30x5	30x5
Dodge Bros. UF30A	1½	595	Own	4	3⅝x4¾	21.0	Pb	Car	P	DR	Own	U	4	Own	Sp	37.17	4	D	136	2665	6.00x20	32x6
Dodge Bros. F 30 A	1½	695	Own	6	3⅛x4⅛	23.4	Pb	Car	P	DR	Own	U	4	Own	Sp	37.17	4	D	136	2765	6.00x20	32x6
Dodge Bros. F 35 A	1½	1425	Own	6	3⅜x2⅞	27.3	Pb	Zen	P	DR	Own	U	4	Own	Sp	41.43	4	D	140	3780	6.00x20	6.00x20D
Dodge Bros. F 40 A	2	1995	Own	6	3⅝x5	31.5	Pb	Zen	P	DR	Own	U	4	Own	Sp	43.73	4	D	150	5175	6.50x20	6.50x20D
Dodge Bros. F 60 A	3	2645	Own	6	3⅝x5	31.5	Pb	Zen	P	DR	Own	U	4	Own	Sp	48.87	4	D	146	5543	32x6	32x6D
Dodge Bros. F 61 A	3	2575	Own	6	3⅝x5	31.5	Pb	Zen	P	DR	Own	U	4	Own	Sp	48.87	4	D	170	5789	32x6	32x6D
Durant	*¾	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Essex Commercial	¾	445	Own	6	2¾x4½	18.2	CS	Mar	Vac	Aut	Own	U	3	Own	Sp	17.8	4	4	110	2150	30x5	31x5.50
Federal D	1-1½	830	Con W 10	4	3⅞x4¼	24.0	Pb	Zen	P	DR	W-G T9	U	4	Cla B374	Sp	40.8	4	Tr	131	3185	6.00x20	32x6
Federal E6	1-1½	1090	Con 17 E	6	3⅜x4	27.3	Pb	Zen	Vac	DR	W-G T9	U	4	Cla B370	Sp	34.6	4	Tr	132	3260	6.00x20	32x6
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	DR	Own	U	4	Tim 52005H	Sp	24.3	4	Tr	132	3765	30x5	30x5D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Cla B610	Sp	38.5	4	Tr	151	4580	32x6	32x6D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 58000H	Sp	41.3	4	Tr	151	4950	32x6	32x6D
Federal A6TW	2½	2360	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 65001H	Wo	42.0	4	Tr	151	4950	32x6	32x6D
*Federal DSW	2½-3	1050	Con W 10	4	3⅞x4¼	24.0	Pb	Zen	P	DR	W-G T9	U	4	Cla B-374	Sp	40.8	6	Tr	158	3800	6.00x20	32x6
Federal T10B	2½-3	2740	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	P	DR	Own	C	4	Tim 58200H	Sp	36.3	4	Tr	165	6550	34x7	34x7D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	P	DR	Own	C	4	Tim 65201H	Wo	44.0	4	Tr	165	6550	34x7	34x7D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	Pb	Str	P	DR	Br-L 55	C	7	Tim 65706HP	Wo	64.6	4	D	165	7220	34x7	34x7D
Federal 4C6A	4-5	4735	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704HP	Wo	73.6	4	D	192	8330	36x8	36x8D
Federal 4C6AB	4-5	4960	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704TWP	Wo	73.6	4	D	192	8850	36x8	36x8D
*Federal U6SW	6	6000	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim SW 200	Wo	71.3	6	Tr	201	9850	34x7	34x7D
*Federal U6SWAB	6	6500	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim SW 200	Wo	71.3	6	Tr	201	9900	34x7	34x7D
Federal X8	7½	5085	Con B 7	4	5 x6	40	Pw	Zen	Vac	AB	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	9750	36x6S	40x14S
Federal X8R	7½	5810	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	10000	40x8	40x8D
*Federal 4C6SW	8	7500	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 55	C	7	Tim SW 300	Wo	80.8	6	Tr	231	11500	36x8	36x8D
Ford AA	1½	510	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	131½	2723	6.00x20	32x6
Ford AA	1½	535	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	157	3161	6.00x20	6.00x20
F. W. D.—H	1½	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H6	2	3425	Wak	6	3¾x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—BTL1	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—HH6	2½	4000	Wak	6	3¾x4½	33.7	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	101 0	4	R	133	5700	36x8	36x8
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6S	36x6S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6S	36x6S
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7S	40x5SD
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6S	36x6S

1930 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
F. W. D.—C U 6	3½	5120	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6S	36x8S
F. W. D.—M 5	5	7600	Wak	6	4⅜x5⅛	40.8	P	Zen	—	Aut	Br-L	C	8	Wis	2R	—	4W	—	165	11800	12.75x20B	12.75x20B
*F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	*	4	170	9500	36x8	36x8
F. W. D.—M 7	7½	8700	Wak	6	5 x5¾	45.9	P	Zen	—	Aut	Br-L	C	8	Wis	2R	--	4W	—	165	13000	44x10P	44x10DP
Garford Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim 54010	Sp	29.2	4	D	162	4500	32x6	D32x6
Garford Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim 63702	Wo	34.8	4	D	168	4900	36x6	D36x6
Garford Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim 63702	Wo	34.8	4	D	168	5100	36x6	D36x6
Garford Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706 D H	Wo	63.0	4	D	175	7000	36x6	D36x6
Garford Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706 D H	Wo	63.0	4	D	175	7100	36x6	D36x7
Garford Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700 D P	Wo	98.2	4	D	175	8200	S36x6	S36x12
Garford Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700 D P	Wo	98.2	4	D	175	8400	S36x6	S36x14
Garford Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700 D P	Wo	95.0	4	D	175	9600	S36x6	S40x14
Gen. Mot. T11-1001	*3800	625	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Pontiac	Sp	14.7	4	4	109⅝	1980	5.00x19B	5.50x19B
Gen. Mot. T15-1501	*5400	695	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51500	Sp	16.14	4	4	130	2625	5.50x20B	5.50x20B
Gen. Mot. T17-1701	*5500	735	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2650	6.50x20B	6.50x20B
Gen. Mot. T17-1707	*6500	750	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2670	5.50x20B	32x6
Gen. Mot. T19-2201	*6300	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2850	5.50x20B	32x6
Gen. Mot. T19-2214	*8500	995	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2925	30x5	30x5D
Gen. Mot. T25-2501	*6800	1235	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3375	6.00x20B	7.50x20B
Gen. Mot. T25-2509	*8500	1300	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3425	30x5	30x5D
Gen. Mot. T30-3206	*9000	1555	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4450	6.00x20B	8.25x20B
Gen. Mot. T30-3203	*11000	1605	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4525	32x6	32x6D
Gen. Mot. T42-4206	*10600	1735	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4575	7.00x20B	9.00x20B
Gen. Mot. T42-4203	*14000	1960	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4905	36x6	36x6D
Gen. Mot. T44-4401	*12000	1965	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	4825	32x6	32x6D
Gen. Mot. T44-4404	*15000	2095	Buick	6	3⅛x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	5095	34x7	34x7D
Gen. Mot. T60-6202	*16500	3035	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	34x7	34x7D
Gen. Mot. T60-6205	*18500	3150	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	9.00x20B	9.00x20DB
Gen. Mot. T82-8202	*19000	3795	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7500	9.00x20B	9.00x20DB
Gen. Mot. T82-8207	*22000	4070	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7850	38x7	38x9D
Gen. Mot. T90-9001	*23000	5885	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9400	7.50x20B	7.50x20D
Gen. Mot. T90-9004	*28000	6055	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9775	8.25x20B	8.25x20DB
*Gramm B	1¾	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	34.3	4	Tr	140	3800	6.50x20	6.50x20D
*Gramm C	2	1795	Lyc ASA	6	3⅝x4½	31.54	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	31	4	Tr	160	4820	7.00x20	7.00x20D
*Gramm D	2½	2195	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	33	4	Tr	160	5100	7.50x20	7.50x20D
*Gramm E	3	2595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	35	4	Tr	160	5300	8.25x20	8.25x20D
*Gramm EY	3	3595	Con 20 R	6	4⅛x4¾	40.80	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	30	4	D	190	6750	32x6	32x6D
*Gramm T-38	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	45	D	R	153	7200	36x5S	36x10S
*Gramm O-45	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	75.8	D	R	153	7700	36x5S	36x12S
*Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	28	4	D	210	7200	34x7	34x7D
*Gramm O-60	5	4745	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	78.4	D	R	153	8800	36x6S	36x14S
*Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25.2	4	D	236	9600	36x8	36x8D
Indiana 60	1	995	Con	6	3¾x4	27.3	Pb	Str	P	Aut	W-G	U	3	Col	Sp	—	4	Tr	132	3200	30x5	30x5
Indiana 64	1	1195	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	3	Col	Sp	—	4	Tr	137	3400	30x5	30x5
Indiana 74	1¼	1290	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	137	3450	32x6	32x6
Indiana 11	1¼	1425	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	—	R	R	129½	3500	30x5	30x5
Indiana 89	1½	1525	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	149	3650	32x6	32x6
Indiana 111	1½	1630	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	—	R	R	129½	3600	30x5	32x6
Indiana 111 XW	2	1850	Her	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L	U	4	Wis	2R	—	R	Tr	120	3740	32x6	32x6D
Indiana 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Tim	Sp	--	4	Tr	156	5200	32x6	32x6D
Indiana 140	2-2½	2495	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	156	5500	32x6	32x6D
Indiana 141	2½	2935	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6200	32x6	32x6D
Indiana 115 A	2½	2740	Her	4	4¼x5	28.9	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	—	R	Tr	132	4970	32x6	34x7D
Indiana 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Indiana 175	3	3660	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	—	U	5	Wis	2R	—	4HV	D	170	7200	34x7	34x7D
Indiana 127 AW	3	3775	Her	4	4¼x5¾	28.90	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	—	RV	D	150¼	7000	34x7	34x7D
Indiana 627 AW	3	4075	Wis	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	—	RV	D	156¼	7200	34x7	34x7D
Indiana 195	3½-3	3820	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Indiana 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Indiana 220	3½-4	4560	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Indiana 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HM	V D	182	10000	40x8	40x8D
Indiana 290	7½	7250	Con	6	4¾x5¾	54.1	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7P	40x14S
*Indiana 640	10	9700	Con	6	4¾x5¾	54.1	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	--	4W	D	212	14000	38x7P	36x10S
International AW-1	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 517	Sp	17.4	4	2	136	2620	5.25x20	5.25x20
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 502 R	Sp	15.1	4	2	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 1124	Sp	52.6	4	2	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3520	30x5	32x6
International AL-3	1½	1450	Lyc SLH	6	3¼x4½	25.3	Pb	Zen	Vac	DR	W-G	U	4	Eat 1518	Sp	42.9	4	2	138	4300	6.00x20	6.00x20D
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	4	Eat 2002	Sp	40.6	4	2	140	4000	32x6	32x6D
Int. Harvester A-4	2	1985	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 1712	Sp	47.8	4	2	145	5070	32x6	32x6D
Int. Harvester HS-54	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 54	2R	60.5	4	4	148	8000	36x5S	36x8S
Int. Harvester HS-54-C	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Own A M 428	Ch	63.8	4	4	148	8665	36x5S	36x10S
Int. Harvester W-1	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 58	2R	60.5	4	2	148	8300	36x5S	36x8S
Int. Harvester A-5	3	2550	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 2112	Sp	52.6	4	2	156	5606	34x7	34x7D
Int. Harvester HS-74	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 74	2R	70.5	4	4	160	10700	36x5S	40x12S
Int. Harvester HS-74-C	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	79.1	4	4	160	11000	36x6S	40x12S
Int. Harv's'r HS-104-C	5	5500	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	90.5	4	4	160	11095	36x6S	40x14S
La France-Repub. A-1	*6000	795	Lyc	6	2⅞x4¾	19.8	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	36.1	4	Tr	132	3000	5.50x20	32x6
La France-Repub. C-1	*7000	1295	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	29.1	4	Tr	144	3300	6.00x20	32x6
La France-Repub. D-1	*9000	1595	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	37.9	4	Tr	144	3725	30x5	30x5D
La France-Repub. F-2	*13000	2395	Lyc	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	40.1	4	D	174	5400	32x6	32x6D
La France-Repub. H-1	*15000	2985	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36.0	4	D	163	5850	34x7	34x7D
La France-Repub. L-1	*18000	3595	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	2R	48.0	4	D	180	6900	36x8	36x8D
La France-Repub. M-1	*20000	3800	Wak	6	4 x4¾	38.4	Pb	Zen	Vac	Aut	Ful	U	5	Eat	2R	62.3	R	D	171	6900	36x8	36x8D
Mack BL	1	2500	Own	6	3¼x5	25.39	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	148	——	B6.00x20	DB6.00x20
†*Mack BG	1½	3000	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	138-156	——	32x6	D32x6
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	36x4S	36x8S
††Mack AB	2½-3	3500	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4S	36x8S
Mack AB	2½-3	4750	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack AB	2½-3	4300	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack B	3-4	5250	Own	6	4 x5½	38.4	Pb	Str	Vac	NE	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	36x8	D36x8
††Mack BC	3½-5	5500	Own	6	4 x5½	38.4	Pb	Str	Vac	NE	Own	U	4	Own	Ch	Opt	4	D	2-Opt		36x8	36x8D
††Mack BJ	3½-5	6150	Own	6	4½x5½	48.6	Pb	Str	Vac	NE	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x8	36x8D
††Mack AK	3½-5	5150	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4	J	3-Opt	——	36x5S	36x5DS
††Mack AK	3½-5	5250	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x5S	36x5DS
††Mack AC	3½-5	4950	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x5S	40x10S
††Mack AC	5½-7	5500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x6S	40x12S
††Mack AC	7½	6000	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x7S	40x14S
††Mack AP	7½	9500	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	R	J	191	——	36x7S	40x8DS
††Mack A C 6-wheel	10	7500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7S	40x12S
††Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7	40x12S
Paige	¾	860	Own	6	3¼x4½	25.35	Pb	DL	P	DR	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B5.50x19	B5.50x19
Relay Series 15 A	1	1400	Con 17 E	6	3¾x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	2R	6.00	4	D	131	3800	P30x5	P30x5
Relay Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5500	36x6	D36x6
Relay Series 50	2	3860	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	6800	36x6	D36x6
Relay Series 40	2½	3275	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5700	36x6	D36x6
Relay Series 50	2½	4000	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	7000	36x6	D38x7

Major Specifications and Mechanical Details of 1930 Commercial Cars Built in the United States

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Relay Series 60	2½	4555	Bud B A 6	6	4¼x5½	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	58.5	4	D	175	7350	36x6	D36x6
Relay Series 50	3	4130	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	7200	36x6	D40x8
Relay Series 60	3	4595	Bud B A 6	6	4¼x5½	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	58.5	4	D	175	7500	36x6	D38x7
Relay Series 80	3	5330	Bud B A 6	6	4¼x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	U	8	Own	R	84.18	4	D	175	8400	36x6	S40x10
Relay Series 60	3½	4745	Bud B A 6	6	4¼x5½	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	58.5	4	D	175	7800	38x7	D40x8
Relay Series 80	3½	5330	Bud B A	6	4⅛x5¼	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8600	36x6	S40x12
Relay Series 80	4	5380	Bud B A	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8800	38x7	S40x14
Relay Series 100	5	6615	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Ful	U	5	Own	R	58.5	4	D	230	10000	9.00x24	D9.75x24
Reo D F 129	½	1095	Own	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	129	——	6.00x20	32x6
Reo 15 Junior	½	785	Con 19 E	6	3⅜x4	27.3	Pb	Sch	P	DR	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	6.00x18	6.00x18
Reo D F	1	1095	Own C B	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	135	3200	6.00x20	32x6
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	34.32	4	Tr	137	3525	6.00x20	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	34.32	4	Tr	152	3700	6.00x20	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	34.32	4	Tr	156	3750	6.00x20	32x6
Reo F H	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6D
Reo F C	2	1645	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6D
Reo F D	2	1745	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6D
Reo G A	3	2035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6D
Reo G D	3	2085	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	78.1	4	Tr	144	4570	32x6	*32x6D
Reo G C S	3	2375	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	210	5320	32x6	32x6D
Rugby T	½	655	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Own	U	3	Own	Sp	15.6	4	4	——	2160	29x5	29x5
Rugby 6-15	1	865	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	2900	20x5.50	32x6
Rugby 615	1½	930	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	3000	5.50x20	30x5D
Selden 7 C	1	1098	Con	6	2¾x4¾	19.84	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	—	4	D	124	3600	30x5	30x5
Selden 17 C	1½	1500	Con	6	3¾x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3000	32x6	32x6
Selden 317 C	1½	1610	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 37 C	2	1935	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	151	4800	32x6	32x6D
Selden 39 C	2½	2920	Con	6	4 x4⅛	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	164	5800	32x6	32x6D
Selden 47 C B	3½	3785	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	171	7200	34x7	34x7D
Selden 47 C D	4	4435	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	5	Wis	2R	—	4	D	171	7600	36x8	36x8D
Selden 67 C	5	4975	Con	6	4⅜x4¾	45.94	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	171	8700	36x8	36x8D
Selden 77	7	7365	Con	6	4¾x5¾	54.15	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	178	12000	36x7	40x7D
Service Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim 54000	Sp	29.2	4	D	162	4500	32x6	D32x6
Service Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim 63702	Wo	34.8	4	D	168	4900	36x6	D36x6
Service Series 60	2½	4580	Bud B A 6	6	4¼x5¼	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706 D H	Wo	63.0	4	D	175	7000	36x6	36x6
Service Series 60	3	4680	Bud B A 6	6	4¼x5¼	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706 D H	Wo	63.0	4	D	175	7100	36x6	D38x7
Service Series 80	3½	5250	Bud B A 6	6	4¼x5¼	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700 D P	Wo	98.2	4	D	175	8200	S36x6	S36x12
Service Series 80	4	5330	Bud B A 6	6	4¼x5¼	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700 D P	Wo	98.2	4	D	175	8400	S36x6	S36x14
Service Series 100	5	5830	Bud B A 6	6	4¼x5¼	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700 D P	Wo	95.0	4	D	175	9600	S36x6	S40x14
Stewart 30	1	695	Lyc AFE	4	3¾x4½	22.5	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2905	6.50x20	6.50x20
Stewart 30 X	1	795	Lyc WRG	6	2⅞x4¾	19.8	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2965	6.50x20	6.50x20
Stewart 40	1½	895	Lyc AFE	4	3¾x4½	22.5	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	130	3215	6.50x20	6.50x20D
Stewart 40X	1½	995	Lyc WTG	6	3 x4½	23.8	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	3250	6.50x20	6.50x20D
Stewart 34 X	1½	1195	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	145	3526	6.50x20	6.50x20
Stewart 28 X	1¾	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	Ful	U	4	Cla	Sp	44.1	4	D	136	3958	6.50x20	6.50x20
Stewart 29XS	2	1695	Lyc ASA	6	3⅝x4½	25.3	Pb	Str	P	DR	Ful	U	4	Cla	Sp	44.1	4	D	145	4450	32x6	32x6D
Stewart 26 XW	2	2290	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5095	32x6	32x6D
*Stewart 18 X	2½	2690	Lyc TP	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5788	32x6	32x6D
Stewart 32 X	2½	1990	Lyc ASA	6	3⅝x4½	31.54	Pw	Str	Vac	DR	Ful	U	4	Cla	Sp	46.1	4	D	165	5100	32x6	32x6D
Stewart 35 X	3	2590	Lyc AFD	6	3¾x4½	33.8	Pw	Str	P	DR	Ful	U	4	Cla	Sp	46.1	4	DR	165	5800	8.25x20B	8.25x20D
Stewart 33 X	3	3290	Lyc TS	6	3⅞xf	36.2	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	105.1	4	D	165	6450	34x7	34x7D
Stewart 19 X	3½	3690	Lyc TS	6	3⅞x5	36.2	Pw	Str	Vac	DR	Ful	C	12	Tim	Wo	105.1	4	D	165	7010	36x5	36x10
Stewart 31 X	5	4990	Wak 6 RSL	6	4⅜x5⅛	45.9	Pw	Str	Vac	DR	Ful	C	8	Tim	Wo	82.1	4	D	165	8400	36x6S	36x6SD
Stewart 27 X	6-7	5700	Wak 6 RSL	6	4⅜x5⅛	45.99	Pw	Str	Vac	DR	Ful	U	8	Tim	Wo	93.81	4	D	165	9927	36x7	40x7D
Studebaker GN-P	¾	845	Own	6	3⅜x4¼	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	15.15	4	‡4	115	2465	6.00x19	6.00x19
Studebaker GN-S	1	1045	Own	6	3⅜x4¼	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	130	2990	6.00x20	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4¼	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	146	3000	30x5	30x5
Studebaker S-20	1½	695	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	36.2	4	4	130	3000	6.00x20	32x6
Studebaker S-30	1½	775	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	36.2	4	4	160		6.00x20	32x6
Studebaker S-50	2	895	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	37.4	4	4	148		6.50x20	6.50x20D
Studebaker S-60	2	945	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	37.4	4	4	160		6.50x20	6.50x20D
Studebaker GN-N	*4000	1245	Own	6	3⅜x4¼	27.3	Pb	Str	P	DR	Cla	U	4	Cla	Sp	33.5	4	D	146	3265	30x5	32x6
Studebaker 77	*12500	2895	Own	8	3½x4¾	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	158	5030	7.00x20	7.00x20D
Studebaker 88	*12500	3295	Own	8	3½x4¾	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5200	7.50x20	7.50x20D
Studebaker 99	*14000	3795	Own	8	3½x4¾	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5680	7.50x20	7.50x20D
Whippet 96 A	½	360	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.74	4	B	103¼	1665	4.75x19	4.75x19
White 15 B		1545	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3402	30x5	30x5
White 60		1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	DR	Own	U	3	Own	Sp	17.9	4	D	138	3739	30x5	30x5
White 57		2725	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3935	32x6	32x6
White 20 A		2125	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	2R	32.1	R	R	145½	4572	34x5	34x5D
White 61		2450	Own 4 A	6	3¾x4½	33.75	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	D	148	4789	30x5	30x5D
White 56		3125	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5276	36x4S	36x7S
White 51 A		3750	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.6	R	D	170	6438	36x5S	36x9S
White 58		4400	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	49.7	D	R	170	6438	36x5S	36x9S
White 55		4650	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	66.1	D	R	174	8737	36x5S	40x5SD
White 52 T		4700	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	76.5	D	R	129½	8461	36x5S	40x5SD
White 52		5100	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	IG	92.3	D	R	174	9409	36x6S	40x12S
White 59 A		6000	Own 3 A	6	4 x5¼	38.4	Pw	Zen	P	DR	Own	U	4	Own	Sp	66.5	D	R	155	9775	40x8	40x14S
White 63		5000	Own 3 A	6	4 x5¼	38.4	Pw	Zen	P	DR	Own	U	4	Own	Sp	41.4	4	D	168	8350	34x7P	34x7DP
White 64		6300	Own 1 A	6	4⅜x5¾	45.94	Pw	Zen	P	LN	Own	U	4	Own	2R	46.8	4	D	180	9154	36x8P	36x8DP
Willys Six 98 B	½	525	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.28	4	B	110	1904	5.50x19	5.00x19
Willys Six C-101	1½	695	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Own	U	4	Cla	Sp	42.33	4	B	131	2740	5.50x20	30x5
Willys-Knight T-103	1½	825	Own KGT	6	2⅞x4¾	20.7	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	42.33	4	B	131	2848	5.50x20	30x5

GENERAL NOTATIONS

*†REFFERENCE MARKS apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

‡WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin; Hall, American Car & Foundry.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all main, connecting rod and camshaft bearings, including wrist pins; CS, circulating splash; Sp, splash.

CARBURETOR—Car, Carter; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; DL, Detroit Lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Vac, Vacuum tank; P, Fuel pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; DR, Delco-Remy; Mag, Magneto.

TRANSMISSION—Br, L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear; Cotta Cotta Gear Company; Cls, Clark Equipment Company.

LOCATION—C, center, amid; U, in unit with engine; J, on jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—IG, Internal gear; St, Straight bevel; Sp, Spiral bevel; Wo, Worm; 2R, Double reduction; Ch, Chain; R, Relay drive.

BRAKES—J, Jackshaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; V, Vacuum booster; W, Westinghouse air brake; B, Both front and rear wheels.

TIRES—B, Balloon; D, Dual; S, Solid; P, Pneumatic

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

Chieftain model also available as Dump Truck, 160-inch wheel base.

Balloon tires optional on Chief, Chieftain and Big Chief models.

AUSTIN

*Price announced in forthcoming issue.

AUTOCAR

*Engines in these models are located under the driver's seat.

BROCKWAY

*Six wheelers.

DIAMOND T.

Myers Magazine oiling system for chassis optional equipment.

DURANT

*Price includes panel body.

F. W. D.

*Indicates six-wheel model. Special power take-off transmission, which provides 3 power take-offs which may be operated in any transmission speed, optional on all models.

*Foot brake on X6 is a Lockheed type, operating on all six wheels.

FEDERAL

*Six wheelers.

GRAMM

Series	Straight Rating	Add. Wheel Base	Pay Load Range
6	10,000	157-174	1¾ tons
B	10,000	157-174	1¾ tons
C	11,000	145-196	2 tons
D	13,000	145-196	2½ tons
E	15,000	145-196	3 tons

GENERAL MOTORS TRUCK

*Capacity indicated for each chassis is the recommended gross weight without exceeding rated capacity of tires. The tire size does not affect the straight rating for which chassis is guaranteed and each model is designed to operate satisfactorily under average conditions with loads giving a total gross weight (chassis, body, equipment and payload) equal to straight rating given below. The additional standard wheel base lengths, the number of additional tire types (tire combinations—each type carrying a recommended gross weight) and the ton range on a nominal payload basis for each model is given below.

Model	Straight Rating	Additional Wh. bases, ins.			Addit'l Tire Types	Pay'd Range
T-11	3800	None			None	½
T-15	5400	141			2	¾
T-17	6500	141			6	¾-1¼
T-19	8500	141		151	20	1-2
T-25	8500	141		152	15	1-1¾
T-30	11000	152		164	13	1½-2½
T-42	14000	152	164	181	10	2-3½
T-44	15000	152	164	181	10	2-4
T-60	18500	166¾	184½	200¼	16	2½-4½
T-82	22000	167½	185¼	201	10	3-6
T-90	28000	201		220	5	5-7½

Optional rear axle ratios are available for all models.

INDIANA

*Six wheelers.

MACK

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

HYP—Hypoid drive, single reduction.

††Made also in tractor models.

REO

Model F A also available on 129-inch wheel base.

RUGBY

F—Chassis weight includes body.

STEWART

Model 30 and 30X can also be supplied in 120 and 140-inch wheel base.

Model 40 can also be supplied in 140 and 160-inch wheel base.

*Model 34X can be supplied in 145, 160 and 176-inch wheel base.

Model 28X can be supplied in 145, 160 and 176-inch wheel base.

Model 29XS can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190-inch wheel base.

*Models 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment models 18X, 19X, 33X, 31X and 27X can be supplied with Timken dual reduction rear axle.

STUDEBAKER

*Capacity model GN-N is 4,000 pounds for body, cab, driver and payload.

Maximum gross load, chassis, body and payload for Models 77 and 88 is 12,500 lbs. and for Model 99 is 14,000 lbs.

‡Hand brake same as foot brake, standard. Hand brake on drive shaft, special equipment.

Production--Engineering--Factory

Use of Aluminum Alloys In Commercial Motor Vehicles

The following, in part, is a paper presented before the Transportation Meeting of the Society of Automotive Engineers, held at Pittsburgh, by Frank D. Goll, Aluminum Company of America, New Kensington, Pa. The concluding installment will appear in the Automotive Daily News tomorrow.

The trend in commercial transportation equipment is toward the light, strong alloys of aluminum, which, developed entirely during the last ten years, are rapidly becoming the accepted structural materials in this line of engineering endeavor. At present it is replacing other metals for the strength members in trucks, motor coaches, steam and electric railway cars and all types of transportation equipment. In the transportation industry the use of aluminum is well exemplified in the case of aluminum commercial motor truck bodies and tanks.

Commercially pure aluminum is used seldom, if ever, for any parts of transportation equipment; usually it is alloyed with another element or elements, such as copper, manganese, magnesium or silicon. Many different alloys are marketed under various trade names. Of the Alcoa alloys only seven are commonly used for commercial motor truck bodies and tanks.

The mechanical properties of 3S alloy depend upon the temper of the metal, which is determined by the amount of strain-hardening or cold-working given the metal during fabrication. Ordinarily, 3S alloy is produced in the following tempers: Annealed, one-quarter hard, one-half hard, three-quarter hard and hard. These are designated 3SO, 3S¼H, 3S½H, 3S¾H, and 3SH. This alloy can be annealed at a temperature of 800 deg. Fahr.

Alloys 17S, 25S and 51S are known as the strong aluminum-alloys. Their maximum mechanical properties are produced by heat-treatment followed by the proper aging treatment. This may consist of either room-temperature aging or an artificial aging treatment. In our company's designations, "W," attached to the end of the alloy number, represents the heat-treated condition: if the alloys are aged after heat-treatment, the symbol "T" is used. The strong alloys can be annealed after heat-treatment by holding them at a temperature of 800 deg. Fahr. for at least one hour, after which they should be very slowly cooled to below 500 deg. Fahr. In the annealed condition the strong alloys are designated 17SO, 25SO and 51SO.

The casting numbers are designated by numbers only and are referred to as No. 12 alloy, No. 43 alloy and No. 195-4 alloy. The No. 195-4 alloy differs from the other two in that it is heat treated to improve its mechanical properties.

Design Considerations

The design of motor truck bodies and tanks of aluminum is essentially the same as that of steel. Since the strong aluminum-alloys are comparable to the common steels in strength, it is possible in replacing steel to use them, in most cases, section for section.

The modulus of elasticity of aluminum alloys is 10,000,000 pounds per square inch, as compared with 29,000,000 pounds per square inch for steel. This means that, under a given stress, aluminum will deflect about 2.9 times as far as steel. For most parts of bodies this fact need not be considered, since the spans are short and deflection is not objectionable. Because it contributes to more resilience in a structure greater deflection is often desired.

There are a few places, such as flooring, where rigidity must be considered. When aluminum-alloy sheet is employed in place of steel for an unsupported span of metal flooring, either the thickness of the aluminum sheet should be increased or the span reduced. If the same span is retained, the thickness of the sheet should be increased about 40 per cent. over that of the steel; if the same thickness of sheet is maintained, the span should be reduced approximately 30 per cent.

If 3S alloy is used in place of steel it is often desirable to increase the section by about 40 per cent., thereby gaining equivalent rigidity. This increase in section doubles the section modulus and reduces the stress in the extreme fiber to one-half as much as in the extreme fiber in the thinner-steel member. Since 3S alloy possesses about one-half the strength of steel, it follows that the aluminum structure is just as strong as the steel structure, but at a saving of 50 per cent. in weight. This basis of reasoning is used particularly in the design of aluminum motor-truck tanks.

Impact stresses in the body, resulting from imperfections or obstructions on the highway, are probably the most devastating encountered in normal operation. Since tests on built-up structures of aluminum and steel have shown that the impact effects are no worse on the former than on the latter, it is recommended that steel practice be followed in designing aluminum bodies and tanks for impact.

Selection of Correct Aluminum Alloy

In selecting the correct aluminum-alloys for the various parts of a motor vehicle body, the three important points to consider are strength, workability and price. Since aluminum bodies are higher priced, the cheapest alloy, which has sufficient strength and workability to meet satisfactorily the requirements, always should be used.

Alloy 3S is well adapted for parts where strength is not of primary importance and where welding is necessary. This alloy has been used for years for panels and is well known to most body builders. It has the advantage of being the cheapest alloy and should be used wherever its strength permits. The roof and panel sheets on van-type bodies are usually of 3S alloy in the hardest temper suitable to the necessary forming. It is also used exclusively for truck tanks, principally because of its excellent welding and forming characteristics. Sheet, in 3S alloy, is produced in two finishes: flat sheet, which has a bright finish, and gray plate, which, as its name implies, is dull. If the panels are to be left unpainted and are to be polished or burnished, flat sheet should be used, but if the panels are to be painted, gray plate should be employed, because its matte surface will receive and hold the paint better. Then, too, gray plate is cheaper than flat sheet. In addition to panels, 3S alloy is used also for low-stressed rivets, such as those used for fastening the panels. Practically all of the piping on motor truck tanks is of 3SH I. P. S. tubing.

Alloys 17ST and 25ST, with mechanical properties similar to those of ordinary steel, are used for the important strength-members. The dividing line in the choice of alloy is often indefinite because, in some commodities, the price is the same. It should be borne in mind that 17ST alloy probably will withstand more severe forming than will 25ST alloy, and this is sometimes the deciding factor. If corrosion resistance is of prime importance, 17ST alloy is somewhat better than 25ST alloy.

Sheet is produced in both 17ST and 25ST alloys in the same gauges, widths and lengths. Considering the difference already mentioned, 25ST alloy should be used where possible, since it is slightly cheaper than 17ST alloy. Structural shapes are produced and carried in stock in both alloys. The more common Carnegie shapes of angles, channels and Z-bars are available in lengths up to 85 feet. Wire, rod and bar are made in both alloys at the same price, so that the selection is based entirely on the required characteristics. Rivets, bolts, nuts, screws and, in fact, all screw-machine products are standard in 17ST alloy.

Alloy 51S in the unaged or "W" condition is very workable, and is adapted to severe forming operations. Usually, after forming, it is aged to 51ST alloy, in which condition is has the same yield-point as have 17ST and 25ST alloys. In the "W" condition it also welds easily, and is sometimes used where 3S alloy is not strong enough. Sheet, in 51S alloy, has the same price as 25S alloy. The endurance limit of 51ST alloy is only 10,500 pounds per square inch, as compared with 15,000 pounds per square inch for 17ST and 25ST alloys. If the stresses in the structure permit, it can be used in place of 17ST and 25ST alloy shapes with an appreciable saving in cost.

Drop-forgings can be produced in any of the wrought alloys, but since strength is generally required, the strong alloys are more commonly used. Alloys 25S and 51S are better adapted to the forging processes than 17S alloy, and hence are standard. After forging these alloys are usually heat-treated and aged.

Casting Alloys

No. 12 alloy, S. A. E. No. 30, is used and generally replaces cast iron section for section. No. 195-4 alloy, with its higher strength, is more nearly comparable with malleable iron. By increasing the sections slightly and changing the heat-treatment, it can often be used to replace steel castings. No. 43 alloy find its use primarily where leak-proof castings are required or where the castings are to be welded to the structure. Tank pipe-fittings are standard I. P. S. fittings made in this alloy.

(To Be Continued)

PROSPECTIVE PURCHASERS MAY HANDLE CONTROLS DURING DEMONSTRATIONS

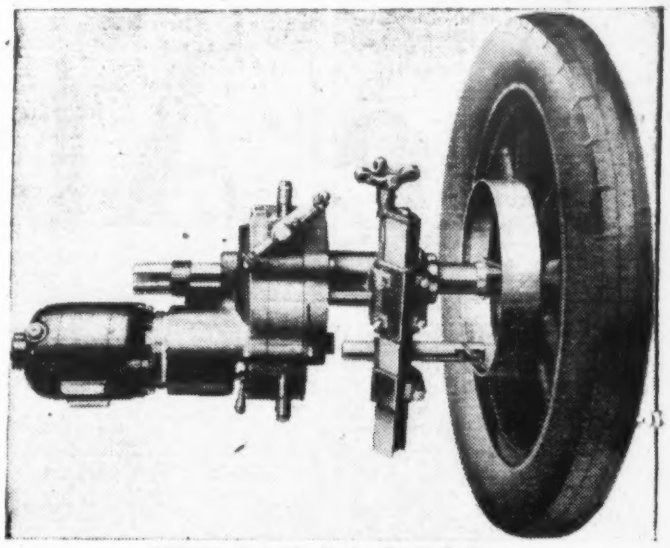
The aeronautics branch of the Department of Commerce has adopted a new policy permitting prospective purchasers of approved type aircraft and prospective students of approved flying schools to handle the controls of aircraft on limited demonstration flights, subject to certain conditions, it was announced yesterday by Clarence M. Young, assistant secretary of commerce for aeronautics.

"This policy," Mr. Young stated, "makes it permissible for transport pilots who are employed regularly by manufacturers, distributors or dealers of aircraft approved by the Department of Commerce as to airworthiness to demonstrate the flying characteristics of aircraft to bona fide prospective purchasers by permitting such prospects to handle the controls while in flight. The policy also applies to transport pilots holding flying instructors' ratings, and regularly employed by flying schools holding an approved school certificate from the Department of Commerce, and permits such pilots to demonstrate the operation of the aircraft to prospective students by permitting them to handle the controls while in flight. All such flights shall be limited in character. Neither prospective students nor purchasers will be deemed to be airmen as defined by the air commerce act of 1926.

"The demonstration flight shall be given to the prospective purchaser or student without charge, and no remuneration shall be received by the firm or school, either directly or indirectly, other than such as may result from the sale of the aircraft or the course of instruction.

"The transport pilot involved, as well as the manufacturer, the distributor, the dealer, or the flying school, will be held strictly accountable for the provisions of this policy."

Stiles Portable Brake Drum, Lathe Announced



STILES Portable Brake Drum Lathe

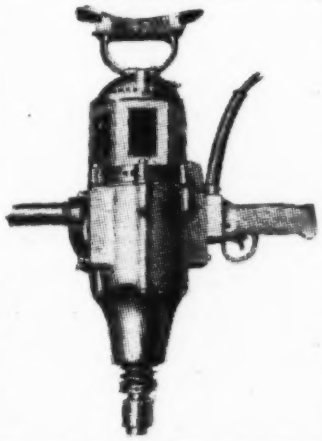
A portable brake drum lathe, weighing less than seventy pounds, has just been announced by the Stiles-Herman Manufacturing Company, St. Louis, Mo.

The use of the Stiles portable brake drum lathe is exactly opposite to that of the conventional lathe. Instead of lifting the weight of the wheel and mounting it on the spindle of the conventional lathe and revolving the wheel, the Stiles lathe is mounted on the hub of the wheel and the tool revolves in a circular path around the spindle.

The automatic action of the Stiles lathe enables the mechanic to turn down the brake drum at the time he is relining shoes or bands.

The price is $285.

BLACK & DECKER ADDS NUT RUNNER

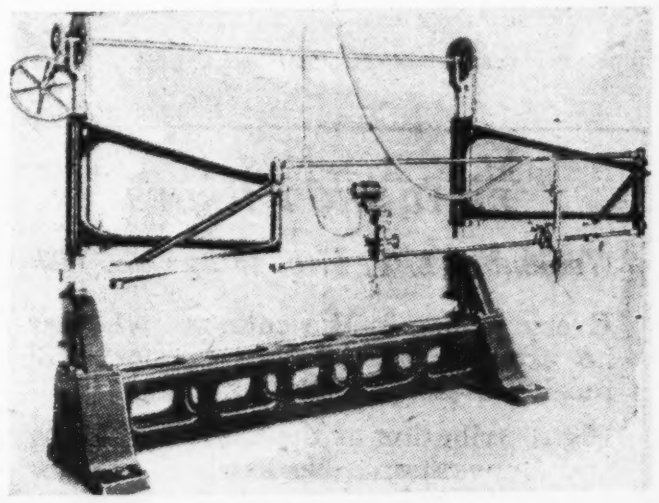


BLACK & DECKER nut runner

The Black & Decker Manufacturing Company, Towson, Md., recently introduced an adjustable clutch nut runner.

The new adjustable clutch is an integral part of the tool. Advantages claimed for the tool are: Uniform tension on nuts or studs eliminating hand testing; stripped threads or fractured threads are prevented; elimination of clutch wear and breakage; operator is relieved of jerks experienced with positive drive tools.

Airco Cutting Machines



AIRCO-DAVIS No. 4 Oxygraph

Air Reduction Sales Company, New York city, has developed two oxygraphs, the No. 1-A for small work and No. 4 for larger designs, to meet the need for rapid and accurate cutting of shapes from steel plates and billets according to drawings or templates.

In both sizes an oxyacetylene cutting torch is mechanically supported and is actuated by a tracing wheel driven by a fractional horse power, 110-volt, variable speed, universal electric motor.

The torch has an electric switch connection which starts and stops the motor when the oxygen cutting jet is turned on or off. It also has control valves to regulate the oxygen and acetylene supply for the preheating flame. It is mounted in a torch holder with a rack and pinion adjustment for height.

The tracing wheel may be guided by hand over the lines of a drawing, or, if enough like cuts are required to make it worth while, a metal template may be made which will guide the wheel automatically.

The speed of the motor may be easily adjusted to the rate of cutting that can be maintained for any given thickness of metal up to twenty inches or more.

Linbergh Crosses the Atlantic!

Another crossing? No, just a history head—not news any more—it happened so long ago. The quicker news is gathered, printed and propagated, the more valuable it is. It cannot be saved up and still be called news. That is the reason we have daily papers all over the world.

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